

**EXPERIMENTATION ON ANIMALS
AS A MEANS OF KNOWLEDGE IN
PHYSIOLOGY, PATHOLOGY,
AND PRACTICAL MEDICINE**

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Experimentation on Animals as a Means of Knowledge in Physiology, Pathology, and practical medicine by J. C. Dalton

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J. C. DALTON

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IN

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AND

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BY

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1875.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in the context of public administration and financial management. The text notes that without reliable records, it is difficult to track the flow of funds and ensure that resources are being used as intended.

2. The second part of the document outlines the various methods and tools used for data collection and analysis. It mentions the use of surveys, interviews, and focus groups to gather primary data, as well as the application of statistical software and data visualization techniques to analyze the information. The author highlights the importance of choosing appropriate methods based on the research objectives and the nature of the data being collected.

3. The third part of the document addresses the challenges and limitations of data collection and analysis. It discusses issues such as data quality, bias, and the potential for misinterpretation of results. The text suggests ways to mitigate these challenges, such as using multiple data sources, conducting pilot studies, and being transparent about the limitations of the data. It also emphasizes the need for careful interpretation and validation of the findings.

4. The fourth part of the document provides a summary of the key findings and conclusions. It reiterates the importance of rigorous data collection and analysis practices and offers recommendations for future research. The author concludes that while data collection and analysis can be challenging, they are essential for gaining a deeper understanding of complex issues and making informed decisions.

INTRODUCTION.

WITHIN the last ten years the method of investigation in the medical sciences, by means of experiments on animals, has been, on several occasions, the object of strenuous attacks on the ground of its inhumanity. The opponents of the practice also allege that it is needless for the acquisition of knowledge; that its results are generally unimportant; and that it is useless, or even deceptive, as a means of discovery and improvement. These allegations emanate from non-professional sources, and are made by men who are unacquainted both with the object of physiological experiments, the manner in which they are conducted, and the history of progress in the medical sciences. It is unnecessary to offer to the medical profession any defence of experimental investigations, since their value is notorious to all who are conversant with the subject. But the educated public, who have not turned their attention to medical matters, cannot be expected to know the facts of the case without some direct statement in regard to it. The recent attacks upon the method of experiment

have sometimes been made in extremely violent and denunciatory language, calculated rather to excite the feelings than to give any intelligent or impartial expression of the truth. It has even been declared, by one of the most active agitators in this field, that "even though these living dissections were productive of all that their advocates claim for them, mankind have no right to the knowledge thus acquired;" and demands have been made, from the same quarter, for legislation which should put a stop to "these wicked contributions to human knowledge, which mankind would be all the better off for never knowing."* It is evident, therefore, that the aggressive movement against experimental investigation is both unreasoning and persistent. It is liable at any time to resume its activity, and to endanger, both in the State of New York and elsewhere, the progress and improvement of physiological medicine. For these reasons it has been thought desirable to present in a condensed form the most important facts in regard to the character, the necessity, and the results of experimentation upon animals for scientific purposes, together with the testimony of the medical profession as to its value.

* In the *New York Evening Post*, September 4th and 12th, 1874.

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial reporting and compliance with regulatory requirements. The text notes that incomplete or inaccurate records can lead to significant legal and financial consequences for the organization.

2. The second part of the document outlines the various methods and tools used to collect and analyze data. It highlights the need for robust data management systems that can handle large volumes of information efficiently. The document also discusses the importance of data security and privacy, ensuring that sensitive information is protected from unauthorized access and breaches.

3. The third part of the document focuses on the integration of data from different sources and the use of advanced analytics to derive meaningful insights. It describes how data integration allows for a more comprehensive view of the organization's performance and helps identify trends and patterns that might not be apparent from individual data sets. The text also mentions the role of artificial intelligence and machine learning in enhancing data analysis capabilities.

4. The fourth part of the document addresses the challenges associated with data management and the strategies to overcome them. It identifies common issues such as data silos, inconsistent data quality, and limited data access. The document provides practical recommendations for addressing these challenges, including implementing data governance frameworks and investing in data management technologies.

5. The fifth part of the document discusses the future of data management and the emerging trends in the field. It highlights the growing importance of cloud-based data solutions and the increasing use of big data and data lakes. The text also mentions the potential of edge computing and the Internet of Things (IoT) in expanding data collection and processing capabilities.

6. The sixth part of the document concludes by emphasizing the need for a data-driven culture within the organization. It stresses that successful data management requires the active participation and buy-in of all employees. The document encourages organizations to invest in training and development programs to ensure that their workforce is equipped with the skills needed to effectively manage and analyze data.

CHAPTER I.

ITS CHARACTER.

THE charge of inhumanity, as brought against the practice of experimentation on animals, seems to ignore in great measure the motive and object of such investigations. Cruelty is the wanton destruction of life or infliction of pain, either for the gratification of a morbid ferocity, or for an unthinking amusement which disregards the suffering it may cause. Neither of these faults can be charged upon scientific investigation. Its object is solely the acquisition of a kind of knowledge which has been shown to be inferior to none in its importance for the welfare of mankind. It is also at the farthest possible remove from a careless or trifling occupation. Scientific knowledge is simply a knowledge which is definite and precise, which has been attained by known means, and which is capa-