



**Strathmore University**

*Centre for Intellectual Property and  
Information Technology Law*

# RIGHT TO RESEARCH AND COPYRIGHT LAW IN KENYA: TEXT AND DATA MINING

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## Introduction

### Why is it necessary to create a legal and copyright environment that supports text and data mining research in Kenya?

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The “right to conduct and receive or access research” is justified by the universally shared freedom of expression and the public’s right to information..

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Researchers seeking to contribute to existing bodies of knowledge require access to data and digital tools, like text and data mining (TDM) research. TDM is described as “any application of a computational process to materials to derive data from or about those works”.<sup>1</sup> TDM projects, such as Blue Dot, led to the discovery of the Coronavirus outbreak and advanced vaccine research.<sup>2</sup> Access to technology and resources is crucial to a country’s development and can lead to increased access to educational advancement.<sup>3</sup> The “right to conduct and receive or access research” is justified by the universally shared freedom of expression and the public’s right to information<sup>4</sup>, as recognized by various national laws, such as articles 33 and 35 of Kenya’s Constitution.

The TDM research process involves, among other processes, reproducing copyright-protected works. Actions such as scanning copies of analogue works, formatting texts and data, extracting useful information and storing data after mining<sup>5</sup> may be considered copyright infringements. Some countries like Singapore and Japan have amended their laws to provide a specific copyright exception for text and data mining. In contrast, others have limitations and exceptions (L&Es) to copyright that allow using copyrighted works for specific purposes without obtaining permission. For example, Kenya has an exception for the unauthorized use of copyrighted works for scientific research. This exception is permitted by way of fair dealing in Kenya. There is no global copyright policy for TDM research, and there is a call for international leadership to develop guidelines on applying copyright to TDM technology.<sup>6</sup>

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Though Kenya’s copyright law provides an exception for scientific research, it is unclear whether it extends to TDM research.

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Though Kenya’s copyright law provides an exception for scientific research, it is unclear whether it extends to TDM research. Additionally, this provision is less flexible than other countries’ copyright laws, which provide for a specific exception for TDM research, or adopt a more flexible fair use exception. Other challenges to access and the use of ICTs for education, learning, and research in Kenya are poor internet connectivity and network infrastructure,<sup>7</sup> a scarcity of Artificial Intelligence (AI) experts,<sup>8</sup> and inadequate funding from the government.<sup>9</sup>

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<sup>1</sup>Sean Flynn et al., ‘Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action’, *Joint PIJIP/TLS Research Paper Series*, no. 48 (2020).

<sup>2</sup>Marc Prosser, ‘How AI Helped Predict the Coronavirus Outbreak before It Happened’, *Singularity Hub* 5 (2020); W. Knight, *Researches Will Deploy AI to Better Understand Coronavirus* (Wired, 2020).; Blue Dot, <<https://bluedot.global/>> accessed on 15 September 2022

<sup>3</sup>Tom Kwanya, *ICT Simplified: A Handbook for the Communication Worker* (Focus Publishers, 2009).

<sup>4</sup>Flynn, Sean and Geiger, Christophe and Quintais, João Pedro and Margoni, Thomas and Sag, Matthew and Guibault, L. and Carroll, Michael W., *Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action* (April 20, 2020). *European Intellectual Property Review* 2020, Vol. 42, Issue 7, 393-398., American University, WCL Research Paper No. 2020-12, Available at SSRN: <https://ssrn.com/abstract=3578819> or <http://dx.doi.org/10.2139/ssrn.3578819>

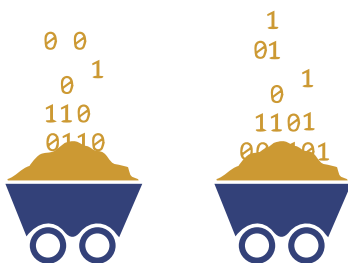
<sup>5</sup>Pamela Samuelson, ‘Text and Data Mining of In-Copyright Works: Is It Legal?’, *Communications of the ACM* 64, no. 11 (2021): 20–22.

<sup>6</sup>Flynn et al., ‘Implementing User Rights for Research in the Field of Artificial Intelligence: A Call for International Action’.

<sup>7</sup>Paul Muga Obonyo, ‘An Investigation in to the Status of Kenya’s Information Communication Technology (ICT) Policy in the Education System’, *European Journal of Education Studies*, 2019.

<sup>8</sup>Mvurya Mgala, ‘The Extent and Use of Artificial Intelligence to Achieve the Big Four Agenda in Kenya’, 2020.

<sup>9</sup>Barasa, ‘Digitalization in Teaching and Education in Kenya: Digitalization, the Future of Work and the Teaching Profession Project’.



CIPIT carried out a study to determine the relationship between Kenya’s technology and copyright legal framework that affect the use of TDM research. It had four specific targets: to determine if Kenya’s technology policy promotes technology, learning, and research; to understand the prospects and plans for enabling a legal environment for research and development of technology; to assess the role of copyright law in enabling TDM research, and finally to provide recommendations for national, regional, and international copyright policies that enable TDM research.

This policy brief is a summary of that study with specific policy recommendations resulting from the study.

## Methodology

The research, which underpins this policy brief, employed three interrelated methods: legal review, comparative analysis, and a survey of respondents involved in text and data mining. The legal review analyzed Kenya’s technology legal framework that promotes learning, research and technology growth. Among the laws analyzed were the Constitution of Kenya, the Science, Technology and Innovation Act, the Computer Misuse and Cybercrimes Act, the Data Protection Act, the National ICT Policy, the Kenya Digital Economic Blueprint and Strategy, and the Distributed Ledger and Artificial Intelligence Taskforce Report. The comparative analysis compared Kenya and South Africa’s copyright legal framework on the exception for research, looking at the relevant provisions under the countries’ Constitutions, Copyright laws, and case law. As the final step, a survey was conducted to assess the practical impact of technology and copyright law on TDM developers and users in Kenya.

## Key Findings

- a. A look at Kenya’s technology legal framework: The potential to promote research and technology.

The global economy is shifting towards a digital economy, and as such, Kenya’s technology legal framework has been making efforts to promote research and development. We analysed several technology laws and policies, and identified the following key objectives that have the potential to promote research and technology, if implemented effectively.

- i. Technology Laws

Through our analysis of various technology laws, we identified the following key objectives aimed at promoting learning, research, and technology in Kenya.

- Kenya’s Constitution of 2010, Article 33, guarantees the right to freedom of expression, which encompasses the, freedom to seek, receive or impart information or ideas; artistic creativity; academic freedom and freedom of scientific research. Our research found that this provision forms the foundation of technology laws that aim to promote learning, research, and technology.
- The Science, Technology and Innovation Act established the National Commission for Science, Technology, and Innovation (NACOSTI) to promote technological advancement, education, and research in Kenya. NACOSTI aims to ensure the quality of science, technology, and innovation and provides guidelines to researchers in Kenya. NACOSTI has defined ‘scientific research’ as an essential component of

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“Kenya’s Constitution guarantees the right to freedom of expression, which includes academic freedom and freedom of scientific research “

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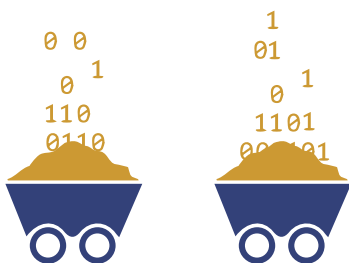
“The Data Protection Act stipulates that any further processing of personal information shall be compatible with the purpose of collection if it is used for research purposes.”

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“The ICT policy seeks to promote science, technology, and innovation, and create an ecosystem that is self-sustaining and produces excellent research, technology products, and industries”.

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understanding and enabling modern research in Kenya.<sup>10</sup>

- The Data Protection Act promotes research under section 53, which stipulates that any further processing of personal information shall be compatible with the purpose of collection if it is used for research purposes. The data controller or data processor is responsible for ensuring that such processing is only performed for those purposes and is not published in an identifiable form. The research results should not be made available in a form that identifies the data subject.
  - The Computer Misuse and Cybercrimes Act plays a part in safeguarding the use of TDM research, prohibiting unauthorized access to computer systems and false publication.
- ii. Technology Policies, Strategies and Initiatives

Through the government’s policies and strategies, it has demonstrated its commitment to promote the development of technology and research. We identified the following objectives of Kenya’s tech policies that promote learning, research and technology growth.

- The National Information Communications and Technology (ICT) Policy and Guidelines aims to create a knowledge-based society by providing accessible, efficient, reliable and affordable ICT services. The policy seeks to move the ICT sector beyond mere trade in technology items, systems development, and software development to a leader in ICT research and development. Moreover, the policy seeks to promote science, technology, and innovation, and create an ecosystem that is self-sustaining and produces excellent research, technology products, and industries.<sup>11</sup>
- The Emerging Digital Technologies for Kenya, Exploration & Analysis Report 2019, commonly known as the Block Chain and Artificial Intelligence Task Force Report 2019 highlights the importance of implementing robust ICT infrastructure to guard against potential cyber threats and safeguard research work.<sup>12</sup>The report emphasizes the Kenyan government’s commitment to evidence-based policy-making,<sup>13</sup> and the need for a proper implementation strategy, a National Digital Infrastructure, and examples of potential use cases for emerging technologies. The report is essential in creating an enabling environment for learning, research and technology in Kenya.
- Kenya’s Digital Economic Blueprint and Strategy aim to unlock the benefits of the digital economy using new and emerging technologies, like TDM research. The Blueprint calls for a fair legal framework, collaborative and accessible research and development, and regulations that adapt to emerging trends and technology. The Strategy recognizes that effective innovation requires efficient and coordinated collaboration between industry, academia, and government and that the current innovation governance is fragmented and requires a unified agenda.

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<sup>10</sup>NACOSTI, National Guidelines for Registration, Licensing, and Regulation of Researchers In Kenya 2021, <https://www.nacosti.go.ke/nacosti/Docs/2021/STI/STI%20Mainstreaming%20PC%20Reporting%20Framework.pdf>, scientific research is defined as, “any investigation or research or inquiry or interview that aims to collect data or information, academic or non-academic, in areas of humanities or pure sciences or engineering or technology or for purpose of marketing survey or opinion polls that will lead to new knowledge or information”.

<sup>11</sup>National ICT Policy 2019, section 4.3

<sup>12</sup>Block Chain and Artificial Intelligence Report, strategy component 6, Cyber Security

<sup>13</sup>Block Chain and Artificial Intelligence Report, strategy component 9, Public Policy Recommendations

Kenya’s tech laws and policies face challenges in implementation, including the need for lengthy and expensive legislative processes. Despite promising policies and strategies, the majority of them have not been implemented, and proposals and initiatives tend to be vague, particularly regarding timelines and funding. In spite of their potential to promote learning, research, and technology, a common gap identified in these laws is their lack of application to the digital world.

- b. A look at Kenya’s copyright law: The possibility of enabling text and data mining research.

In Kenya, the unauthorised use of copyrighted work for scientific research by way of fair dealing is permitted. We analysed Kenya’s copyright exception for scientific research, and compared it to South Africa’s copyright exception for research.

**A Comparative Legal Analysis of Kenya and South Africa’s Copyright Exception for Research**

| No. | Kenya                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | South Africa                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Kenya’s <b>Constitution</b> , 2010 underpins the rights provided for research and copyright. Providing for the freedom of expression including the freedom of scientific research. [Article 33]                                                                                                                                                                                                                                                                                                                               | Similarly, South Africa’s <b>Constitution</b> provides for <i>the right to freedom of expression, which includes freedom of scientific research.</i> ” <sup>1</sup>                                                                                                                                                                                                                                                              |
| 2   | Kenya’s <b>Copyright Act, 2001</b> (as amended in 2022) provides for the exception to copyright by way of fair dealing for scientific research purposes provided the author is acknowledged.<br><br>Kenya’s provision is more flexible on the use of the work, than that of the SA copyright law. Under Kenya’s law, fair dealing is permitted for the reproduction, translation or adaptation, distribution, publication and broadcast of the work for the limited purposes. [section 26, and Second Schedule Part A (1)(a)] | Similarly, South Africa’s <b>Copyright Act, 1978</b> provides for a general exception from protection of literary and musical works by fair dealing for the purposes of research, provided the author is acknowledged.<br><br>Unlike Kenya, however, the type of use of the work for research is not specified.                                                                                                                  |
| 3   | Kenya’s copyright Act fails to provide a definition of ‘fair’ or ‘scientific research’. Thus creating uncertainty on whether text and data mining research falls under this copyright exception.                                                                                                                                                                                                                                                                                                                              | There is no definition provided for ‘fair’ or ‘research’. Thus creating uncertainty on the applicability of this exception for TDM research.                                                                                                                                                                                                                                                                                     |
| 4   | Kenya’s <b>Intellectual Property Bill</b> , 2020 provides for limitations to the exclusive rights awarded by copyright in accordance to a schedule referred to but is not been provided. This bill appears to reproduce the current Act without consideration of broadening the law to enable modern technologies, like TDM research.                                                                                                                                                                                         | South Africa has a <b>Copyright Amendment Bill</b> , 2018 that seeks to broaden its limitations and exceptions to copyright. The Bill proposes a shift from fair dealing to the more flexible fair use principle under section 12A.<br><br>In comparison to fair dealing, fair use has guiding factors that help determine whether a certain use is fair or not as opposed to providing a close-ended list as with fair dealing. |

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In Kenya, the unauthorised use of copyrighted work for scientific research by way of fair dealing is permitted

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“There is no definition provided for ‘fair’ or ‘research’. Thus creating uncertainty on the applicability of this exception for TDM research.”

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“In the case of Communication Commission of Kenya & 5 others v Royal Media Services Limited & 5 others [2014] eKLR, Kenya’s Supreme Court interpreted section 26 of the Copyright Act.”

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| 5 | In the case of <b>Communications Commission of Kenya &amp; 5 others v Royal Media Services Limited &amp; 5 others [2014] eKLR</b> , Kenya’s Supreme Court interpreted section 26 of the Copyright Act by applying a six-factor test to determine fairness. The court assessed (1) the purpose of the dealing; (2) the character of the dealing; (3) the amount of the dealing; (4) alternatives to the dealing; (5) the nature of the work; and (6) the effect of the dealing on the work. <sup>2</sup> It found that the use of copyrighted work, in the instance, satisfied the fair dealing defense to copyright infringement. | In the case of <b>Moneyweb (Pty) Ltd v Media 24 Ltd &amp; another [2016] 3 All SA 193 (GJ); 2016 (4) SA 591 (GJ)</b> , South Africa’s High Court similarly expressed the difficulty in determining what is considered fair, and expanded the understanding of the fair dealing exception. It provided the following factors to consider. (1) Whether the dealing is commercially competing with the copyright owner; (2) Whether the work is already published, or exposed to the public, or is used by way of a breach of confidence; and (3) The amount and significance of the amount taken. |
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<sup>1</sup>Republic of South Africa Constitution, Article 16(1)(c) and 16(1)(d)

<sup>2</sup>For the full judgment, see Kenya Law, <http://kenyalaw.org/caselaw/cases/view/101689/>. For more on the six-factor test see CCH Canadian Ltd v Law Society of Upper Canada, [2004] 1 SCR 339, 2004 SCC 13. For an analysis on the Kenyan Supreme Court decision, see Nzomo, ‘In the Public Interest: How Kenya Quietly Shifted from Fair Dealing to Fair Use’.

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We surveyed TDM developers and users to identify their awareness of Kenya’s copyright law in enabling TDM research.

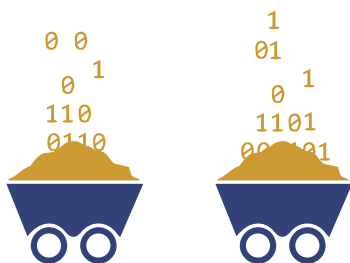
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Our research found that both countries have the fair dealing copyright exception applicable for research purposes. However, both countries’ copyright laws contain ambiguous provisions, which compounds the narrow construction of fair dealing copyright exceptions in these laws.<sup>14</sup> The result of this is that the rights-holder has more control over the use of their works, and at the same time limiting the dissemination of information without the rights-holder’s authority.<sup>15</sup> Another shortcoming in these Acts is the failure to make clear what constitutes fair dealing in digitized works. Unlike Kenya, South Africa is attempting to cure this with its amendment to offer a ‘future-proof’ fair use principle on copyright exceptions.

c. A look at Kenya’s text and data miners: awareness of copyright.

We surveyed TDM developers and users to identify their awareness of Kenya’s copyright law in enabling TDM research. Our key findings are highlighted below.

- i. The majority of respondents (32%) identified the Data Protection Act as a law that promotes learning, research and technology in Kenya, while only 18% identified the Copyright Act as promoting technology, learning and research.
- ii. The majority (56%) of respondents believed copyright law affects TDM, AI, and ML, as enforcement of copyright law limits the use of the data to a certain level, and because the generation of work aided by AI and ML requires protection of intellectual property rights. 23% did not think copyright affects TDM, AI and ML, and 21% were unsure.



<sup>14</sup>Ayamunda J & Nwabachili C C, Copyright Exceptions and the Use of Educational Materials in the Universities in Kenya [2015] Journal of Law, Policy and Globalization

<sup>15</sup>Amstrong C, De Beer J, Kawooya D, Prabhala A, Schonwetter T, Access to Knowledge in Africa, The Role of Copyright (UCT Press, IDRC 2010), Kenya Chapter

- iii. Most respondents (62%) opined that copyright law could protect the data. In comparison, 21% thought copyright law could not protect the data used for research purposes, and the rest did not know.
- iv. The majority of the respondents (82%) were unaware of the fair dealing copyright exception under Kenya’s Copyright Act, and only 18% were aware. Of this majority, 28% of the respondents purchased or licensed the data set used for mining, and 72% did not. Many respondents stated that they obtained the accessible data from the internet, or by using public data sets, but some were unsure whether the data sets they used were subject to copyright protection.
- v. Most respondents (62%) opined that it is essential to have exceptions to copyright infringement for TDM research purposes.
- vi. Most respondents (85%) believed that copyright law should allow researchers to make copies of works for TDM, as long as it is for non-commercial research and the author is acknowledged. However, 12% of respondents did not agree with this, citing concerns that AI is dynamic hence there is the potential for data abuse and the need to sell data for commercial research.

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“The majority of the respondents (82%) were unaware of the fair dealing copyright exception under Kenya’s Copyright Act ...”

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## Policy Recommendations

Kenya has made significant progress in developing a robust technology and copyright legal framework to align with international best practices, and to address various challenges that have been identified in the existing legal regime. Nevertheless, there is scope for more to be done in Kenya to create an enabling legal environment for TDM research, and we offer the following recommendations:

- a. The Kenyan government should implement current technology laws and policies that promote research and technology. This includes the development and amendments of legislation and regulations to implement the laws, and engaging stakeholders through public participation. For example, Kenya’s Data Commissioner should prepare a code of practice containing practical guidance concerning the processing of personal data for purposes of research.
- b. The Kenyan government should reform outdated technology laws and policies to promote research and technology. This includes, for example, adopting proposals in the 2019 Report of the Block Chain and Artificial Intelligence Task force, which seek to promote technology and research by leveraging the benefits of emerging technologies.
- c. The Kenyan government should establish clear guidelines and strategies that provide access and use of data for research purposes using modern technology, like TDM. This could be included in Kenya’s Digital Economy Strategy and its national education sector strategy.
- d. There should be promotion of collaboration between the government, researchers and industry stakeholders to facilitate the exchange of ideas leading to the development of technology growth and benefit.
- e. The Kenyan government should provide funding for research, high-speed internet and broadband infrastructure, and access to data repositories and data sets to research and improve Kenya’s technology sector.
- f. The Kenyan legislators should amend the copyright law considering:
  - i. Expanding the existing narrow fair dealing framework to enable the

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“The Kenyan government should establish clear guidelines and strategies that provide access and use of data for research purposes using modern technology, like TDM.”

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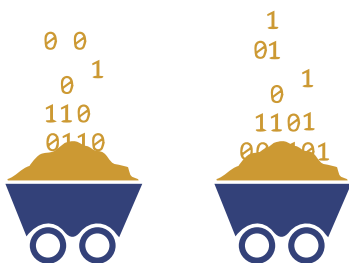
“... promote increased awareness and education concerning copyright exceptions among researchers, judicial officers and other stakeholders”

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“ Improve the TDM process in Kenya by sensitizing people in the field about copyright law and developing guidelines on using data appropriately.”

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- digital environment and, specifically, to accommodate digital research technologies.
- ii. A shift from fair dealing to fair use under the copyright exceptions to prevent the need to keep amending the law to apply to new technology.
  - iii. The inclusion to the Kenyan Copyright Act of a definition of ‘fair’, by enshrining the six-factor fairness test relied upon by the Supreme Court of Kenya.
  - iv. The inclusion to the Kenyan Copyright Act of a definition of ‘scientific research’. We propose two options. First, is research that is carried out for non-commercial purposes, and secondly, we propose adopting the definition coined by NACOSTI<sup>16</sup>.
  - v. The provision of a specific exception for text and data mining research in the Copyright Act.
- g. The Kenya Copyright Board (KECOBO) should provide clarity and guidance on the application of the current copyright exception for scientific research to TDM research.
- h. The government and KECOBO should promote increased awareness and education concerning copyright exceptions among researchers, judicial officers and other stakeholders, to ensure that they are aware of their rights and responsibilities when using copyrighted material for research. Most survey respondents suggested that copyright law could best promote the right to research by balancing the copyright owner’s concerns and the TDM researchers’ needs. However, a lack of awareness of the law was a key challenge faced by most respondents. The following were among the respondent’s recommendations.
- i. Some respondents recommend improving the TDM process in Kenya by sensitizing people in the field about copyright law and developing guidelines on using data appropriately.
  - ii. Some respondents recommended developing guidelines on the repercussions of using data obtained inappropriately for gainful research.
  - iii. We recommend including copyright law in the education curriculum for TDM developers, scientists and researchers.

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<sup>16</sup>“any investigation or research or inquiry or interview that aims to collect data or information, academic or non-academic, in areas of humanities or pure sciences or engineering or technology or for purpose of marketing survey or opinion polls that will lead to new knowledge or information.”



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