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Regulating big data. The guidelines of the Council of Europe in the context of the European data protection framework

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A B S T R A C T

In January 2017 the Consultative Committee of Convention 108 adopted its Guidelines on the Protection of Individuals with Regard to the Processing of Personal Data in a World of Big Data. These are the first guidelines on data protection provided by an international body which specifically address the issues surrounding big data applications.

This article examines the main provisions of these Guidelines and highlights the approach adopted by the Consultative Committee, which contextualises the traditional principles of data protection in the big data scenario and also takes into account the challenges of the big data paradigm. The analysis of the different provisions adopted focuses primarily on the core of the Guidelines namely the risk assessment procedure. Moreover, the article discusses the novel solutions provided by the Guidelines with regard to the data subject's informed consent, the by-design approach, anonymization, and the role of the human factor in big data-supported decisions.

This critical analysis of the Guidelines introduces a broader reflection on the divergent approaches of the Council of Europe and the European Union to regulating data processing. Where the principle-based model of the Council of Europe differs from the approach adopted by the EU legislator in the detailed Regulation (EU) 2016/679. In the light of this, the provisions of the Guidelines and their attempt to address the major challenges of the new big data paradigm set the stage for concluding remarks about the most suitable regulatory model to deal with the different issues posed by the development of technology.

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1. Introduction

In February 2016 the Council of Europe began the process for drafting specific guidelines on the protection of personal information in the big data context, on the basis of Convention 108. After a year-long discussion of the draft proposal by the Parties, the final text of the "Guidelines on the protection of individuals with regard to the processing of personal data in a world of Big Data" (hereinafter Guidelines) was adopted in January 2017.[1]

These Guidelines concern big data in a broad perspective[2] and their focus is not on the traditional 3Vs paradigm (volume, velocity, and variety), which is used to describe the growing technological ability to collect, process and extract new and predictive knowledge from large amounts of data. As described in the Guidelines, "in terms of data protection, the main issues do not only concern the volume, velocity, and variety of processed data, but also the analysis of the data using software to extract new and predictive knowledge for decision-making purposes".[3] The Guidelines therefore concern both big data and big data analytics.[4]

Against this background, this article does not focus on the procedure that led to the adoption of the Guidelines or on the position of each of the Parties to the Convention during the discussion of the draft proposal, but sets out to highlight the novel approach adopted by the Council of Europe in its document. In this vein, this article critically analyses the main areas and provisions of the Guidelines.

Since the Guidelines are part of the broader European regulatory framework on data protection, the second section takes into account the approach adopted by the EU legislator in the new regulation on data protection and indicates the limits of Regulation (EU) 2016/679 in defining an adequate legal response to big data issues. The main reason for these limits lies in the decision to maintain the traditional paradigm in data protection regulation, which is based on the purpose limitation principle, the notice and consent model, and the individual dimension of data protection.

On the other hand, analysis of the provisions of the Guidelines adopted by the Council of Europe – in Section 3 – points out how a tailored application of this traditional paradigm may produce a different regulatory outcome. In the light of this, the Guidelines take into account not only the individual dimension of data protection, but also its collective dimension, mainly with regard to the ethical and social impact of data uses.[5] Moreover, the provisions of the Guidelines reveal an awareness of the limits affecting the data subject's consent and encourage a participatory model[6] in assessing the risks related to the use of personal data.

This risk assessment plays a central role in the architecture of the Guidelines and represents the main instrument used by the Consultative Committee of Convention 108 to go beyond the individual dimension of data protection. Potential risks are not restricted to well-known privacy-related prejudice, but also include other kinds of prejudice concerning the conflict between big data applications and ethical and social values.

Finally, big data regulation represents an opportunity to discuss the two different regulatory approaches existing in Europe: the EU detailed regulation on data protection (Regulation (EU) 2016/679) and the principle-based model adopted

[1] The author had the privilege to be appointed as consultant expert in drafting the text of the guidelines and to follow the discussion of the proposal by the representatives of the Parties to Convention 108 in the Bureau of the Consultative Committee of Convention 108 and the Plenary Meeting. The final version of the Guidelines, which is the result of this discussion and benefits from the various contributions of all the Parties, was adopted on January 23. The Guidelines were approved by the 50 voting members of the Council, with the abstention of Denmark, Liechtenstein and Luxembourg, while Germany and Ireland objected. The Guidelines are available at <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016806ebe7a> accessed 4 February 2017. The drafting of the Guidelines followed a previous theoretical study conducted by Antoinette Rouvroy, see Antoinette Rouvroy, '"Of Data and Men": Fundamental Rights and Liberties in a World of Big Data' (2016) <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016806a6020> accessed 25 October 2016.

[2] The Guidelines do not provide an authoritative definition of big data, since there are many definitions of big data, which differ depending on the specific field of application. The term "Big Data" usually identifies extremely large data sets that may be analysed computationally to extract inferences about data patterns, trends, and correlations. According to the International Telecommunication Union, Big Data are "a paradigm for enabling the collection, storage, management, analysis and visualization, potentially under real-time constraints, of extensive datasets with heterogeneous characteristics" (ITU, 'Recommendation Y.3600. Big data – Cloud computing based requirements and capabilities' (2015) <https://www.itu.int/rec/T-REC-Y.3600-201511-I/en> accessed 25 October 2016).

[3] See Guidelines, Section III (Terminology used for the purpose of the Guidelines). See also David Bollier, 'The Promise and Perils of Big Data' (Aspen Institute, Communications and Society Program 2010) <http://www.aspeninstitute.org/sites/default/files/content/docs/pubs/The_Promise_and_Peril_of_Big_Data.pdf> accessed 27 February 2014. See also Pertti Ahonen, 'Institutionalizing Big Data methods in social and political research' (2015) Big Data & Society 1–12 <http://bds.sagepub.com/content/2/2/2053951715591224> accessed 21 July 2015.

[4] This term is used to identify computational technologies that analyse large amounts of data to uncover hidden patterns, trends and correlations. According to the European Union Agency for Network and Information Security (ENISA), the term Big Data analytics "refers to the whole data management lifecycle of collecting, organizing and analysing data to discover patterns, to infer situations or states, to predict and to understand behaviours" (ENISA, 'Privacy by design in big data. An overview of privacy enhancing technologies in the era of big data analytics' (2014) <https://www.enisa.europa.eu/publications/big-data-protection> accessed 4 September 2016).

[5] For a literature review on the ethical impact assessment, see Rasmus Øjvind Nielsen, Agata M. Gurzawska and Philip Bray, 'Principles and Approaches in Ethics Assessment. Ethical Impact Assessment and Conventional Impact Assessment. Annex 1.a Ethical Assessment of Research and Innovation: A Comparative Analysis of Practices and Institutions in the EU and selected other countries. Project Stakeholders Acting Together on the Ethical Impact Assessment of Research and Innovation – SATORI. Deliverable 1.1' (2015) <http://satoriproject.eu/work_packages/comparative-analysis-of-ethics-assessment-practices/> accessed 15 February 2017.

[6] See also Clare Shelley-Egan et al., 'SATORI Deliverable D2.1 Report (handbook) of participatory processes' (2014) <http://satoriproject.eu/work_packages/dialogue-and-participation/> accessed 15 February 2017.

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