Stanford – Vienna
Transatlantic Technology Law Forum

A joint initiative of
Stanford Law School and the University of Vienna School of Law

European Union Law Working Papers

No. 127

The Legal Protection of Databases: A Comparative Study of EU and Turkish Law

Taha Yasin Gönül

2026

European Union Law Working Papers

Editors: Siegfried Fina and Roland Vogl

About the European Union Law Working Papers

The European Union Law Working Paper Series presents research on the law and policy of the European Union. The objective of the European Union Law Working Paper Series is to share "works in progress". The authors of the papers are solely responsible for the content of their contributions and may use the citation standards of their home country. The working papers can be found at http://ttlf.stanford.edu.

The European Union Law Working Paper Series is a joint initiative of Stanford Law School and the University of Vienna School of Law's LLM Program in European and International Business Law.

If you should have any questions regarding the European Union Law Working Paper Series, please contact Professor Dr. Siegfried Fina, Jean Monnet Professor of European Union Law, or Dr. Roland Vogl, Executive Director of the Stanford Program in Law, Science and Technology, at:

Stanford-Vienna Transatlantic Technology Law Forum
http://ttlf.stanford.edu

Stanford Law School
Crown Quadrangle
559 Nathan Abbott Way
Stanford, CA 94305-8610

University of Vienna School of Law
Department of Business Law
Schottenbastei 10-16
1010 Vienna, Austria

About the Author

Taha Yasin Gönül is a lawyer registered with the Istanbul Bar Association in Turkey. He holds an LL.M. degree with distinction in European and International Business Law from the University of Vienna, Austria, which he pursued as a scholar of the Jean Monnet Scholarship Programme funded by the European Union. He obtained his LL.B. from Istanbul University, Turkey.
His professional and academic work focuses on intellectual property law, with a particular emphasis on its intersection with European Union law. In this context, he engages with legal issues arising in commercial practice, while also drawing on his experience in corporate law as well as media and communications law.

General Note about the Content

The opinions expressed in this student paper are those of the author and not necessarily those of the Transatlantic Technology Law Forum, or any of TTLF's partner institutions, or the other sponsors of this research project.

Suggested Citation

This European Union Law Working Paper should be cited as:
Taha Yasin Gönül, The Legal Protection of Databases: A Comparative Study of EU and Turkish Law, Stanford-Vienna European Union Law Working Paper No. 127, http://ttlf.stanford.edu.

Copyright

© 2026 Taha Yasin Gönül

Abstract

In the age of the Fourth Industrial Revolution, data evolved from a static asset into the primary fuel for Artificial Intelligence (AI) and machine learning. This transformation necessitates a legal framework that can balance the incentive to invest in database production with the imperative to access data for innovation. This thesis provides a critical and comparative analysis of the database protection regimes in the European Union and the Republic of Türkiye, evaluating their fitness for the modern data economy.

The study examines the dual protection structure, copyright and the sui generis right, under the EU Database Directive (96/9/EC) and its transposition into the Turkish Law on Intellectual and Artistic Works (FSEK). It argues that while the EU has proactively adapted its legislation through the Directive on Copyright in the Digital Single Market (EU) 2019/790 by introducing mandatory Text and Data Mining (TDM) exceptions, the Turkish framework remains stuck in a superficial harmonization. The analysis highlights that Turkish law suffers from systemic inconsistencies which fail to reflect the realities of the data age. More critically, the absence of specific TDM exceptions in Türkiye creates a significant legal barrier for AI development and research, potentially placing the national market at a competitive disadvantage.

Furthermore, the thesis investigates the role of Technological Protection Measures (TPMs) as de facto regulators. It posits that relying solely on technical locks without robust rights for lawful uses risks creating data monopolies. Consequently, the study traces the emergence of a potential paradigm shift in copyright theory, moving from viewing user privileges merely as defensive exceptions towards recognizing a positive right to access, and evaluates its viability as a solution for the data economy. Applying this theoretical framework, the thesis proposes a comprehensive legislative reform in Türkiye to safeguard legitimate data analysis against both legal and technical overreach, thereby aligning the national landscape with the requirements of the global digital economy.

Table of Contents

Table of Abbreviations III
Chapter 1 – Introduction 1
1.1. General Context: The Data Economy and the Value of Information 1
1.2. The Problem Statement: The Paradox of Protection 2
1.3. Methodology and Scope 3
1.4. Structure of the Study 4
Chapter 2 – Database Protection under EU Law 4
2.1. The Legal Framework of Database Protection in the European Union 4
2.1.1. Historical Background and Policy Objectives 4
2.1.2. Policy Objectives and Legal Framework 10
2.1.3. Definition of Database 15
2.2. Copyright Protection of Databases 16
2.2.1. Conditions for Copyright Protection 16
2.2.2. Ownership and Authorship Issues 20
2.2.3. Scope of Protection and Exceptions 23
2.3. The Sui Generis Right for Databases 28
2.3.1. Concept and Legal Nature of the Right 28
2.3.2. The Requirement of Substantial Investment 30
2.3.3. Scope of Protection: Extraction and Re-utilisation 37
2.3.4. Beneficiaries and Term of Protection 46
2.4. Text and Data Mining (TDM) Exceptions and Databases 48
2.4.1. The Scientific Research Exception 50
2.4.2. The General Exception and the Opt-Out Mechanism 52
2.4.3. Applicability to Artificial Intelligence Training Activities 53
Chapter 3 – Database Protection under Turkish Law 55
3.1. Legislative Background of the Fikir ve Sanat Eserleri Kanunu (FSEK) 55
3.2. Copyright Protection of Databases under Turkish Law 58
3.2.1. Definition of Database 58
3.2.2. Conditions for Copyright Protection 59
3.2.3. Ownership and Authorship 64
3.2.4. Scope of Protection and Exceptions 68
3.3. The Sui Generis Right for Databases under Turkish Law 76
3.3.1. Concept and Legal Nature 76

3.3.2. The Requirement of Substantial Investment 78
3.3.3. Scope of Protection: Extraction and Re-utilisation 82
3.3.4. Duration and Ownership 86
3.3.5. Structural Ambiguities and Enforcement Deficiencies 87
3.4. The Absence of Text and Data Mining Exceptions 89
Chapter 4 – Technological Protection Measures (TPMs) and the Access Crisis 90
4.1. The Evolution of 'Code': From Enemy to Guardian 90
4.2. The EU Approach 93
4.2.1. Legal Basis under the InfoSoc and CDSM Directives 93
4.2.2. The Nintendo Case and the Proportionality Standard 96
4.3. The Turkish Legal Framework regarding TPMs 97
4.3.1. The Anti-Circumvention Regime (FSEK Article 72) 98
4.3.2. The Ambiguity of the Right to Lock 98
4.4. Critique and Proposal: From an Obligation to Facilitate to a Right to Access 100
4.4.1. Re-evaluating the Exceptions 101
4.4.2. Re-defining the Limits of TPMs 102
4.4.3. The Turkish Context: Turning a Gap into a Model 103
Chapter 5 – Conclusion and Recommendations 104
5.1. The Systemic Fatigue of the FSEK and the Need for a Total Overhaul 104
5.2. Re-evaluating the Enforcement Gaps 105
5.3. Theoretical Outlook: From 'Exceptions' to a 'Right to Access' 106
5.4. Final Remarks 107
Bibliography 109
Table of Cases 120

Table of Abbreviations

AI : Artificial Intelligence

BHB : British Horseracing Board

CJEU : Court of Justice of the European Union

DRM : Digital Rights Management

EU : European Union

FSEK : Fikir ve Sanat Eserleri Kanunu

IoT : Internet of Things

IPR : Intellectual Property Rights

RMI : Rights Management Information

SMEs : Small and Medium-sized Enterprises

TDM : Text and Data Mining

TFEU : Treaty on the Functioning of the European Union

TPM : Technological Protection Measures

TR : Turkish

TRIPS : Agreement on Trade-Related Aspects of Intellectual Property Rights

UK : United Kingdom

US : United States

WCT : WIPO Copyright Treaty

WPPT : WIPO Performances and Phonograms Treaty

Chapter 1 – Introduction

1.1. General Context: The Data Economy and the Value of Information

We are currently living in the era of the Fourth Industrial Revolution, a period defined not by steam or electricity, but by data.[1] In the modern digital economy, information has become a primary asset of competitive and monetary value that powers innovation, drives economic growth, and underpins the development of disruptive technologies such as Artificial Intelligence (AI) and the Internet of Things (IoT).[2]

The production of databases requires substantial investment of financial resources, time, and effort.[3] Whether it is a real-time financial market feed, a genomic library for vaccine research, or a comprehensive customer list, databases are the bedrock of the information society. However, the nature of data as an informational asset makes it inherently vulnerable. As information, data is non-rivalrous, meaning that one person's use does not diminish the ability of others to use the same data;[4] however, it is primarily when data is embodied in digital form that this vulnerability becomes economically salient, as digital technologies enable instantaneous, perfect, and near-zero-cost copying.[5] These characteristics create a market

[1] A Kamperman Sanders, 'Data and Technology Transfer: Competition Law in the Fourth Industrial Revolution' in C Heath, A Kamperman Sanders and A Moerland (eds), *Intellectual Property Law and the Fourth Industrial Revolution* (Kluwer Law International 2020) 200.

[2] Josef Drexl, 'Data Access as a Means to Promote Consumer Interests and Public Welfare – An Introduction' in German Federal Ministry of Justice and Consumer Protection and Max Planck Institute for Innovation and Competition (eds), *Data Access, Consumer Interests and Public Welfare* (Nomos 2021) 17; Michael Freno, 'Database Protection: Resolving the US Database Dilemma with an Eye toward International Protection' (2001) 34 *Cornell International Law Journal* 188.

[3] Directive 96/9/EC of the European Parliament and of the Council on the legal protection of databases [1996] OJ L 77/20 (*Database Directive*), recital 7.

[4] A good or service is non-rivalrous where one person's consumption does not diminish the ability of others to consume the same good. Information goods, including data, are typically characterised by non-rivalry, since the marginal cost of providing access to an additional user is often close to zero. Miriam Bitton, 'New Outlook on the Economic Dimension of the Database Protection Debate, A' (2006) 47 IDEA 98-100; Yochai Benkler, 'Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information' (2000) 15 Berk Tech LJ 535, 543; Lucie Guibault, *Copyright Limitations and Contracts: An Analysis of the Contractual Overridability of Limitations on Copyright* (PhD thesis, University of Amsterdam 2002) 14 <http://hdl.handle.net/11245/1.205006> accessed 12 January 2026.

[5] Estelle Derclaye, *The Legal Protection of Databases: A Comparative Analysis* (Edward Elgar 2008) 2.

failure: without legal protection, free-riding competitors can appropriate the fruits of a database maker's investment without bearing the costs, thereby destroying the incentive to invest in data generation.[6]

1.2. The Problem Statement: The Paradox of Protection

To address this market failure, legislators have developed specific intellectual property regimes. The European Union (EU) pioneered this effort with the 1996 Database Directive[7], introducing a dual system of protection: copyright for the creative structure and sui generis right to protect the substantial investment in data obtaining, verification, and presentation. As a candidate country, the Republic of Türkiye has harmonized its legislation, specifically the Law on Intellectual and Artistic Works (FSEK)[8], to align with this European acquis.

However, the expansion of database protection rights has created a new tension. While protection is necessary to incentivize production, over-protection risks stifling the very innovation it seeks to promote. In the age of Big Data, innovation relies less on reading individual database entries and more on automated analysis, such as text and data mining (TDM), to discover patterns and train machine learning models. If the sui generis right or technological protection measures (TPMs) are used to lock up data and prevent legitimate analysis, the legal framework becomes a barrier to innovation and scientific progress.

The central problem addressed in this thesis is how to strike the correct balance between protecting the investment of database makers and ensuring access for users in the age of data.

---

[6] Wendy J Gordon, 'Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property' (1992) 17 *U Dayton L Rev* 853, 869

[7] Directive 96/9/EC of the European Parliament and of the Council on the legal protection of databases [1996] OJ L 77/20 (*Database Directive*).

[8] Law No 5846 on Intellectual and Artistic Works (Fikir ve Sanat Eserleri Kanunu), Official Gazette 13 December 1951 No 7981 (Türkiye) (*FSEK*).

This challenge is analyzed through a comparative lens, examining how the EU has modernized its framework via the Directive on Copyright in the Digital Single Market (CDSM Directive)[9] and how Turkish law, despite its harmonization efforts, faces critical structural and enforcement gaps.

1.3. Methodology and Scope

This study employs a legal dogmatic and comparative methodology. It analyzes the primary legislative texts, relevant case law from the Court of Justice of the European Union (CJEU) and the Turkish Court of Cassation (*Yargıtay*), and academic doctrine.

The scope is limited to the protection of databases. It encompasses:

i. **Copyright Protection:** Focusing on the originality threshold and the dichotomy between the protection of structure versus content.
ii. **The Sui Generis Right:** Examining the condition of substantial investment, the 'spin-off' doctrine regarding data creation versus obtaining, and the scope of prohibited acts (extraction/re-utilisation).
iii. **Exceptions and TDM:** Analyzing the new TDM exceptions in the EU and the lack thereof in Türkiye.
iv. **Technological Protection Measures (TPMs):** Investigating the TPM mechanism in the EU and Türkiye with the interplay between anti-circumvention rules and lawful access.

[9] Directive (EU) 2019/790 of the European Parliament and of the Council of 17 April 2019 on copyright and related rights in the Digital Single Market and amending Directives 96/9/EC and 2001/29/EC (Text with EEA relevance) [2019] OJ L 130/92 (*CDSM Directive*).

1.4. Structure of the Study

Following this introduction, Chapter 2 provides a comprehensive analysis of the EU framework, detailing the historical evolution from the Berne Convention[10] to the Database Directive and the recent CDSM Directive. Chapter 3 examines the Turkish legal landscape, highlighting the legislative history of the FSEK, the specific deficiencies in the sui generis regime, and the enforcement problems arising from drafting errors. Chapter 4 addresses the critical role of TPMs and compares the EU's proportionality approach with the specific legislative gaps in the Turkish anti-circumvention regime. Finally, Chapter 5 synthesizes the findings and offers concrete legislative proposals for the Turkish lawmaker to ensure a balanced and competitive data economy.

Chapter 2 – Database Protection under EU Law

2.1. The Legal Framework of Database Protection in the European Union

2.1.1. Historical Background and Policy Objectives

Arguments over how and to what extent legal protection should be granted for databases are nothing new. Traditionally, database protection in Europe relied primarily on copyright law.[11] According to Article 2(5) of the Berne Convention, "*collections of literary or artistic works such as encyclopaedias and anthologies which, by reason of the selection and arrangement of their contents, constitute intellectual creations*" shall be protected as such.[12] Electronic and hard-copy databases are considered under this scheme; however, to be eligible for copyright protection, they must meet the originality criteria, which leaves no room for general protection

[10] Berne Convention for the Protection of Literary and Artistic Works (as amended on September 28, 1979)
[11] Derclaye (n 5) 1-2.
[12] Although the European Union is not a signatory to the Berne Convention, by reference to WCT Art 1(4) – which the EU is a signatory to – Articles 1-21 and Appendix I of the Berne Convention have been incorporated into the community acquis. See Case C-683/17 *Cofemel* EU:C:2019:721, para 41.

of non-original databases.[13] Furthermore, this protection applies merely to compilations of literary or artistic works, thus leaving most databases that consist of factual information outside the scope, even when they exhibit originality in the selection and arrangement of their contents.[14] This limitation was effectively superseded by Article 10(2) of the TRIPS[15] and subsequently by Article 5 of the WIPO Copyright Treaty[16]. These international instruments expanded the scope of copyright eligibility to include 'compilations of data or other material', provided they meet the originality threshold in their selection or arrangement.

Civil law jurisdictions, rooted in the *droit d'auteur* tradition which emphasizes the personal bond between the author and the work, set a high standard of originality, seeking a personal judgment in the selection and arrangement of the data.[17] By contrast, the United Kingdom and the Republic of Ireland relied on the 'sweat of the brow' doctrine, which allowed them to protect databases under copyright based on the labour and effort invested by their creators, thereby applying a lower threshold of originality than civil law jurisdictions, and granted protection under this scheme to subject matters such as horse-race fixtures or television program listings.[18] Nevertheless, neither of the traditions extends its scope of protection to the data compiled in the database and provides only a limited level of protection for the selection and arrangement of the contents.[19]

[13] Cristina Garrigues, 'Databases: a Subject-Matter for Copyright or for a Neighbouring Rights Regime?' (1997) 19(1) EIPR 3, 3; Bryce Clayton Newell, 'Discounting the Sweat of the Brow: Converging International Standards for Electronic Database Protection' (2011) 15 Intell Prop L Bull 111, 112.
[14] Mark J Davison, *The Legal Protection of Databases* (Cambridge University Press 2003) 54.
[15] Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) (15 April 1994) 1869 UNTS 299.
[16] WIPO Copyright Treaty (WIPO WCT) (20 December 1996, entered into force 6 March 2002) 2186 UNTS 121.
[17] Anirban Mazumdar, 'Information, Copyright and the Future' (2007) 29(5) EIPR 180, 183; Garrigues (n 13) 3-4; W. R. Cornish, '1996 European Community Directive on Database Protection' (1996) 21 Colum-VLA JL & Arts 1, 1-2.
[18] Mark Schneider, 'The European Union Database Directive' (1998) 13 Berkeley Tech LJ 551, 553; Derclaye (n 5) 9; Newell (n 13) 116; Miriam Bitton, 'Exploring European Union Copyright Policy through the Lens of the Database Directive' (2008) 23 Berkeley Tech LJ 1411, 1420-21; Cornish (n 17) 5.
[19] Cornish (n 17) 2-3; Mazumdar (n 17) 183.

However, with the widespread use of the internet in the early 1990s and rapid technological developments – particularly in the field of computer science and information technologies – copying activities became cost-free, fast, and remarkably easy.[20] As in other intellectual property rights (IPR) subject matters, this rendered databases vulnerable to free-riding.[21] At the same time, these technological advancements facilitated the emergence of new markets in the field of electronic information, where electronic databases increasingly came to the forefront.[22] Indeed, the ease with which electronic databases could be copied led to Europe-wide debates on whether unfair competition rules could fill the growing protection gap.[23] It became evident that traditional copyright principles were insufficient: even databases containing factual information that passed the high originality thresholds in civil law jurisdictions were left unprotected with respect to their contents, exposing them to parasitic competitors and threatening the substantial investments required to produce them.[24]

Moreover, all these issues emerged at a time when electronic databases were gaining strategic importance for Europe – a historical coincidence that is hardly accidental. Policy documents produced by the EU (then the European Communities - EC) confirm this concern. The Commission observed that Europe was struggling to expand its presence in the global database market, while the U.S. industry not only dominated that market but was also growing at a significantly faster pace.[25]

All these considerations regarding the insufficiency of traditional copyright principles to protect databases were also reflected in the jurisprudence of the time. In 1991, the Supreme Court of

[20] Derclaye (n 5) 2.
[21] ibid.
[22] Bitton (n 4) 94.
[23] J H Reichman, 'Legal Hybrids between the Patent and Copyright Paradigms' (1994) 94 Colum L Rev 2432, 2475.
[24] ibid 2490-92.
[25] J H Reichman and Pamela Samuelson, 'Intellectual Property Rights in Data?' (1997) 50 Vanderbilt L Rev 49, 74 <https://scholarship.law.vanderbilt.edu/vlr/vol50/iss1/3> accessed 12 January 2026; Bitton (n 18) 1422.

the Netherlands (Hoge Raad) in its *Van Dale v Romme*[26] case ruled that in order for a subject matter to qualify as a literary work which is subject to copyright, it shall have an original and individual character that bears 'the personal imprint of its maker'. The dispute in *Van Dale v. Romme* arose when Mr. Romme copied approximately 230,000 headwords from the *Grote Van Dale* dictionary, reorganised them into a new list, and used this compilation as the basis for a database intended for crossword puzzle solving. Although the case concerned a seemingly mechanical extraction of factual material, the Supreme Court's assessment highlighted the narrow boundaries of copyright protection for factual compilations. More importantly, this case functioned as an early warning within the European legal landscape by revealing the vulnerability of non-original databases.[27] It also illustrated that traditional copyright principles, which are grounded in notions of originality and individual intellectual creation, are insufficient for safeguarding the substantial investments involved in large-scale factual compilations. In this context, the case of *Van Dale v. Romme* played a pivotal role in elevating awareness at the EU level and in highlighting the structural deficiencies that would subsequently be addressed through the implementation of the Database Directive.

Shortly after this, the *Feist v. Rural*[28] decision by the US Supreme Court drew significant attention. The case concerned Feist Publications, Inc.'s copying of Rural Telephone Service Co.'s telephone directory, which led Rural to allege that Feist had infringed its copyright. In its assessment, the court stated that originality is a *sine qua non* for copyright protection, and that originality requires two prerequisites: independent creation and 'a modicum of creativity'. According to the court, while a collection of facts can be considered original because the author

[26] Hoge Raad der Nederlanden [HR] [Supreme Court of the Netherlands], *Romme/Van Dale Lexicografie*, 4 January 1991. An informal English translation of the judgement can be found in E Dommering and P B Hugenholtz (eds), *Protecting Works of Fact: Copyright, Freedom of Expression and Information Law* (Kluwer Law International 1991) vol 1, Appendix I, 93–96 <https://www.ivir.nl/publicaties/download/1_9789041180742.pdf> accessed 12 January 2026.
[27] Bitton (n 18) 1426.
[28] *Feist Publications Inc v Rural Telephone Service Co*, 499 US 340 (1991).

chooses which facts to include, their order, and how to arrange the data for effective use, copyright protection covers only the original components created by the author, not the facts themselves.[29] This distinction between fact and expression significantly restricts the protection available for fact-based works.[30] Therefore, it was ruled that the database consisting of Rural's telephone listings is not eligible for copyright, and the court explicitly rejected the 'sweat of the brow' doctrine.

Both the *Van Dale v. Romme* and *Feist v. Rural* cases were critical in supporting the idea that Europe should take pioneering steps in the field of database protection.[31] Electronic databases were becoming increasingly important, new markets were emerging, and technological developments made copying very easy – especially for electronic databases, while creating databases remained costly. In civil law jurisdictions, the high originality standard meant that many databases could not qualify for copyright protection. For many databases, the real value lies in the data itself,[32] so even when a database satisfies the criteria for originality, protection efforts encompass only the structural aspects, excluding the content. Similarly, regulations aimed at preventing unfair competition prove to be inadequate in safeguarding this valuable data.[33] Against this backdrop, the EU introduced the Database Directive, which both harmonized copyright rules across common law and civil law jurisdictions and established a new sui generis right that extends protection to the content of databases.

Economic and policy considerations aside, it is not surprising from a historical perspective that the EU was the first to introduce a sui generis protection regime for databases in 1996, as it was

[29] ibid.
[30] ibid.
[31] P Bernt Hugenholtz, 'Implementing the European Database Directive' 3 <https://www.ivir.nl/publicaties/download/PBH-HCJ-LIB.pdf> accessed 12 January 2026.
[32] Commission of the European Communities, *Green Paper on Copyright and the Challenge of Technology - Copyright Issues Requiring Immediate Action*, COM (88) 172 final, Brussels, 7 June 1988, para 6.1.5; Derclaye (n 5) 45.
[33] Derclaye (n 5) 2.

already familiar with similar instruments, such as the 'catalogue rule' introduced by the Nordic countries (i.e., EU member states Denmark, Finland, Sweden, and non-member states Iceland and Norway) in the 1960s.[34]

Catalogue rule introduced protection against exact imitation of compilations of large amounts of data, such as catalogues or tables, for 10 years, without imposing any originality criteria as apply to copyright.[35] The rationale behind this rule was the same as that for sui generis protection: to safeguard the investment and labour that went into creating those compilations of data.[36] In this regard, the catalogue rule clearly aligns with sui generis database protection under the Database Directive rather than with copyright protection for databases that meet the requirements. Although the catalogue rule does not entirely coincide with the modern notion of a database, it nevertheless shares significant similarities with it. Telephone directories, for instance, were treated as such, and the rule was widely regarded as a means of protecting databases.[37] Accordingly, it may be assumed that this rule formed the basis for the sui generis database protection established under the Database Directive.[38]

The Netherlands also had a similar protection system for non-original writings, originating from an 18th-century printer's right, which also covered non-original databases.[39] This special system, so-called '*geschriftenbescherming'*, was regarded as a 'thin' copyright regime and extended protection even to trivial or mundane writings, provided that they were or aimed to be published.[40] While this protection was limited and did not grant a full monopoly, it sought to

[34] Derclaye (n 5) 2-9; (however, Icelandic provision is differently phrased and dated 1975) Gunnar W G Karnell, 'The Nordic Catalogue Rule' in E J Dommering and P B Hugenholtz (eds), *Protecting Works of Fact: Copyright, Freedom of Expression and Information Law* (Kluwer Law International 1991) 67
[35] Karnell (34) 67-69; Hugenholtz (n 31) 17.
[36] Karnell (34) 70.
[37] ibid 72.
[38] Hugenholtz (n 31) 17; Reichman (n 23) 2493.
[39] Hugenholtz (n 31) 19.
[40] P Bernt Hugenholtz, 'Protection of Compilation of Facts in Germany and The Netherlands' in E J Dommering and P B Hugenholtz (eds), *Protecting Works of Fact: Copyright, Freedom of Expression and Information Law* (Kluwer Law International 1991) 63-64.

protect the significant investments made in collecting, organizing, fixing, and publishing such writings, and it was successfully used for databases.[41] After the adoption of the Database Directive, *geschriftenbescherming* was seen in the Netherlands as a way to protect databases that did not qualify for *sui generis* database protection – meaning those created without substantial investment.[42] However, the legal sustainability of this regime was severely challenged following the *Football Dataco*[43] judgment. In this ruling, the Court clarified that the Database Directive harmonizes the copyright protection for databases to such an extent that it precludes Member States from granting copyright protection to databases that do not meet the criterion of the 'author's own intellectual creation'.[44] Thus, maintaining a separate national copyright protection for non-original writings became dogmatically difficult to reconcile with the EU acquis, and, consequently, on January 1, 2015, the relevant protection, *geschriftenbescherming*, was abolished.[45]

2.1.2. Policy Objectives and Legal Framework

The objectives of the Database Directive can fundamentally be categorized into two main goals: ensuring the proper functioning of the internal market[46] and fostering the development of an information market within the European Union.[47]

To ensure the efficient functioning of the internal market, the Directive sought to harmonize copyright standards across Member States. As explained above, prior to this harmonization, a significant dichotomy existed. While civil law jurisdictions required a high threshold of

[41] A C Beunen, 'Geschriftenbescherming: The Dutch Protection for Non-original Writings' in P B Hugenholtz, A A Quaedvlieg and D J G Visser (eds), *A Century of Dutch Copyright Law – Auteurswet 1912–2012* (DeLex 2012) 58 <https://hdl.handle.net/1887/20321> accessed 12 January 2026.
[42] ibid 68.
[43] Case C-604/10 *Football Dataco Ltd and Others v Yahoo! UK Ltd and Others* EU:C:2012:115.
[44] ibid paras 47-50.
[45] Eerste Kamer, *Wetsvoorstel 33800: Afschaffing* <https://www.eerstekamer.nl/wetsvoorstel/33800_afschaffing> accessed 12 January 2026.
[46] Database Directive, recitals 1-4.
[47] Database Directive, recitals 7-11 and 38-40.

originality or intellectual creation, common law jurisdictions applied the sweat of the brow doctrine, offering protection based merely on the effort and investment expended, and therefore applied more leniently. This regulatory divergence created a profound legal uncertainty that acted as a barrier to trade. Database producers faced a fragmented legal landscape where a product protected in one Member State might be considered public domain in another immediately upon crossing the border. It was considered that such unpredictability discouraged cross-border trade, as rights holders were reluctant to market their databases in jurisdictions where their proprietary efforts could be exposed to free-riding.[48] Recitals 2 and 4 confirm these considerations, providing insights into how this legal fragmentation and uncertainty hinder the free movement of database goods and services.

Furthermore, as implied in Recital 2, these differences led to distortions of competition within the internal market. The lower threshold for protection in common law countries conferred a comparative advantage upon them, effectively incentivizing investment to flow disproportionately toward jurisdictions like the United Kingdom.[49] For instance, at that time, it was estimated that the UK held a 50% share of the online database services market in Europe; a dominance explicitly recognized by the Commission as placing common law jurisdictions in a more favourable position compared to their continental counterparts.[50]

However, the UK's primary position in the database market did not solely depend on the application of a low standard of originality. Indeed, the UK industry also favoured significant linguistic advantages, as English was – and remains – the preferred language for commercial

[48] Indranath Gupta, *Was Feist a Catalyst for the Structure of the Database Directive? A Legal Exploration of the Implications of the Feist Decision* (PhD thesis, Brunel University 2015) 9.
[49] Commission of the European Communities, *First Evaluation of Directive 96/9/EC on the Legal Protection of Databases* (DG Internal Market and Services Working Paper, Brussels, 12 December 2005) 8. Available at: <https://openfuture.eu/wp-content/uploads/2021/12/2019EC-evaluation_report_legal_protection_databases_december_2005_en.pdf> accessed 12 January 2026
[50] ibid.

usage, making English-language databases naturally more prevalent.[51] Additionally, the UK may have possessed certain technical advantages in infrastructure.[52] Nevertheless, the legal disparity created an uneven playing field in which producers in countries with stricter copyright standards were at a competitive disadvantage.

Simultaneously, it was observed that the information market was expanding and gaining critical importance, yet the European Union's market share remained particularly low compared to the United States. Under the conditions of that era, the EU was almost entirely dependent on foreign commercial databases.[53] This significant disparity is reflected in the Commission's 1988 Green Paper. This gap was particularly glaring regarding electronic publishing in the mid-1980s.[54] In this context, for the EU to achieve a more competitive role in the global information market and to ensure the free flow of information, great importance was attributed to the functioning of the internal market.[55] It was argued that the Community needed to invest in advanced information processing systems, and to attract such investment, a uniform legal protection regime was required.[56]

However, to secure market support, it was primarily necessary to protect the 'substantial investment' of those who invested in database creation. Indeed, it was concluded that database makers were left vulnerable, particularly in the face of digital recording technologies. The ease with which content could be copied fostered the emergence of parasitic competitors, a situation

[51] Charles R. McManis, 'Database Protection in the Digital Information Age' (2001) 7 Roger Williams U L Rev 7, 30; Bitton (n 4) 115.
[52] 2005 First Evaluation Report (n 49), 7.
[53] This was subject to one notable exception: Reuters, a UK-based company, was the world leader at the time in providing financial real-time information; see McManis (n 51) 30.
[54] 1988 Green Paper (n 32), para 6.2.1. The Paper notes that, in relation to electronic publishing, the United States accounted for approximately four-fifths of worldwide turnover in 1985, while Germany, France, and the United Kingdom together represented approximately 12 per cent of the total.
[55] ibid.
[56] Database Directive, recitals 10-12.

that undermined significant investments. Consequently, it was determined that the contents of databases required a distinct protection mechanism.[57]

Interestingly, the justifications found in the Directive's recitals reflect a strong bias towards electronic databases. In fact, the initial proposal presented by the Commission envisaged regulations solely for electronic databases, effectively excluding non-electronic compilations.[58] However, the scope was subsequently expanded to include non-electronic databases as well. This expansion was driven by practical necessity; restricting protection solely to electronic databases would have necessitated a precise legal distinction and definition between electronic and non-electronic forms, a task fraught with technical difficulties. Moreover, such a distinction would have been inconsistent with international standards, as Article 10(2) of the TRIPS Agreement covers compilations of data, whether in machine-readable or other form. Furthermore, it was deemed inappropriate that a database exploited in both forms could enjoy protection in its digital version while remaining unprotected in its analogue format.[59]

Ultimately, it can be posited that the underlying and ultimate policy objective of the Directive is almost exclusively economic in nature.[60] Against this backdrop of economic necessity and harmonization goals, the Database Directive (96/9/EC) was adopted as the lex specialis for the protection of databases. However, this Directive does not operate in a legal vacuum; rather, it forms an integral part of the broader European Union intellectual property law acquis.

First and foremost, the Directive establishes a specific relationship with other existing Community legislation. Specifically, the Directive applies without prejudice to provisions covering computer programs, rental and lending rights, and the term of protection.[61] A crucial

[57] Database Directive, recitals 38-42.
[58] Commission, *Proposal for a Council Directive on the Legal Protection of Databases* COM(92) 24 final, OJ C 156, 23.6.1992 (*First Proposal*), art 1(1).
[59] Council Common Position (EC) No 20/95 of 10 July 1995 with a view to adopting Directive 96/9/EC on the legal protection of databases [1995] OJ C 288/14, Statement of the Council's Reasons, para 8.
[60] Derclaye (n 5) 40.
[61] Database Directive, art 2.

distinction must be drawn regarding software: while databases often rely on computer programs for their operation and access, the Directive explicitly excludes such software from its scope. Article 1(3) clarifies that protection under the Database Directive does not extend to computer programs used in the making or operation of databases. This separation ensures that the functional code is treated distinctly from the informational content it manages.

Furthermore, the legal framework for databases is significantly complemented by the InfoSoc Directive (2001/29/EC)[62], most notably, with the protection of technological protection measures (TPMs).

The framework has been further modernized by the adoption of the Directive on Copyright in the Digital Single Market (CDSM Directive 2019/790). Addressing the needs of the data economy, Articles 3 and 4 of the CDSM Directive introduced mandatory exceptions for text and data mining. These provisions directly affect database rights by permitting, under certain conditions, the automated analysis of text and data in digital form, thereby balancing the exclusive rights of database makers with the necessities of scientific research and innovation.

Finally, looking towards the future of the legal landscape, the framework is currently being reshaped by the European Data Strategy.[63] This strategy explicitly prioritizes evaluating the existing IPR framework, including the Database Directive, with a view to further enhancing data access and use. Thus, the legal protection of databases in the EU is governed by a complex, multi-layered ecosystem in which the Database Directive serves as the core pillar, supported and limited by broader copyright and digital market regulations.

[62] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society [2001] OJ L167/10 (*InfoSoc Directive*).
[63] Commission, *A European Strategy for Data* COM(2020) 66 final (2020) (*European Data Strategy*).

2.1.3. Definition of Database

The cornerstone of the EU database protection regime is the legal definition provided in Article 1(2) of the Directive. Accordingly, a 'database' is defined as *"a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means"*. This broad definition is deliberately technology-neutral[64] and encompasses both electronic and non-electronic collections. To qualify as a database under the Directive, a collection must satisfy three cumulative conditions.

Independent Materials

First, the contents of the database must be independent. Materials are considered independent if they are separable from one another without their informative, artistic, or other value being affected.[65] This criterion serves to distinguish databases from other works, for instance, a cinematographic work would qualify as a database within the meaning of the Directive, as its constituent elements – such as individual frames or scenes – would lose their meaning or integrity if separated from the continuous sequence.[66]

Systematic or Methodical Arrangement

Second, the materials must not be merely stored together within a collection; they must be structured. This requires that the collection be contained in a fixed base of some sort and include technical or other means to allow the retrieval of independent materials contained within it.[67] Although this arrangement does not necessarily need to be physically apparent, the database must include a mechanism, such as a table of contents or a particular plan, to facilitate

[64] *Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosfairou AE (OPAP)* (Case C-444/02) EU:C:2004:697 (*Fixtures Marketing v OPAP*), para 20.
[65] ibid para 29.
[66] Database Directive, recital 17.
[67] *Fixtures Marketing v OPAP*, para 30.

navigation.[68] This requirement excludes unstructured accumulations of data where the content cannot be effectively managed or retrieved.

Individually Accessible

Finally, the systematic or methodical arrangement must allow for the retrieval of any piece of information within the database. This condition acts as a natural extension and complement to the 'arrangement' requirement. The arrangement must enable the user to pinpoint and extract specific data elements, rather than compelling them to consume the collection as a monolithic whole.

Consequently, the Directive's definition covers a vast array of information products, ranging from traditional encyclopedias and telephone directories to modern websites, provided they meet these structural requirements.

2.2. Copyright Protection of Databases

2.2.1. Conditions for Copyright Protection

It is crucial to distinguish the object of this protection. Copyright under the Directive protects merely the structure, specifically the selection and the method of arrangement of data, but does not extend to the contents themselves. Article 3(2) clarifies that this protection applies without prejudice to any rights subsisting in the data. Therefore, the copyright regime is concerned with the creative 'shell' rather than the data contained within. Indeed, this dichotomy lies at the heart of the Directive's dual system: whereas copyright protects the organizational structure, the sui generis right is uniquely designed for the protection of the content.

[68] ibid.

The legal basis for the copyright protection of databases is established in Chapter II of the Directive. Article 3(1) sets forth the fundamental criterion for protection, stating that databases which, 'by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation shall be protected as such'. The Directive explicitly designates originality as the sole criterion for eligibility.[69] Consequently, no other standards, specifically those of an aesthetic or qualitative nature, may be applied.[70]

In defining this eligibility standard, the Database Directive adopted the exact phrasing previously established by the EU's first copyright directive, the Computer Programs Directive (91/250/EEC).[71] This alignment was not accidental, as prior to these legislative interventions, a broad and divergent spectrum of originality thresholds was observed across Member States.[72]

For instance, before the implementation of the Directives, Germany maintained the highest standards of originality in the EU, where the required creative level was said to exceed even that of an 'average skilled person'.[73] In this sense, alongside Directive 91/250/EEC, the Database Directive held particular significance for the EU as it presented a uniform originality threshold. It emphasized the author's rights view, thereby elevating the originality criteria in common law countries (which, as explained, previously relied on 'sweat of the brow')[74], while effectively reducing the standard for jurisdictions such as Germany.[75] However, this standard was generally perceived as being limited to the specific subject matters of these Directives.

[69] Database Directive, art 3(1).
[70] Database Directive, recital 16.
[71] Council Directive 91/250/EEC on the legal protection of computer programs [1991] OJ L 122/42, Art 1(3).
[72] Mark J Davison, 'Database Protection: Lessons from Europe, Congress, and WIPO' (2007) 57 Case W Res L Rev 829, 832.
[73] Davison (n 14) 118.
[74] Davison (n 72) 832.
[75] ibid; Bitton (n 18) 1445. As previously mentioned, the Database Directive essentially adopted the 'originality' phrasing found in the earlier Computer Programs Directive 91/250 (1991). Thus, the first instrument lowering the originality threshold in countries like Germany was Directive 91/250. For detailed information, see Marianne Levin, 'The Cofemel Revolution – Originality, Equality and Neutrality' in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021) 82, 89-90.

In fact, until *Infopaq*, the standard presented by the Database Directive (and the Computer Programs Directive) was not regarded or evaluated by Member States as a general horizontal originality standard for all works.[76] It was the *Infopaq* ruling that clarified that this standard is not limited to databases but applies in parallel to other subject matters protected under the EU copyright framework.[77]

The Directive chose the phrase 'author's own intellectual creation' to articulate this concept. While the Directive did not define this concept in detail, the CJEU has provided an autonomous and uniform interpretation through a series of landmark judgments. The rule is simple: Only subject matters that are 'original in the sense that they are their author's own intellectual creation' shall be eligible for copyright protection.[78]

But what precisely does it mean to be the author's own intellectual creation? Is it merely a question of ownership, meaning that it is a creation of the author and does not belong to anyone else, or should the emphasis be placed on creativity?

The Court has clarified that an intellectual creation is considered the author's own if it reflects the author's personality; in other words, if it bears the author's 'personal touch'.[79] This reflection is achieved when the author is able to express their creative abilities in the production of the work by making free and creative choices.[80] For example, in literary works, this creativity is found in the choice, sequence, and combination of words,[81] just as in databases, it must be found in the selection or arrangement of data. This principle is both necessary and sufficient, meaning that no other consideration should be given.[82] For instance, whether the creators of the database

[76] Levin (n 75) 91.
[77] Case C-5/08 *Infopaq International A/S v Danske Dagblades Forening* EU:C:2009:465, paras 35-37.
[78] ibid.
[79] Case C-145/10 *Eva-Maria Painer v Standard VerlagsGmbH and Others* EU:C:2011:798, paras 87-92.
[80] Case C-469/17 *Funke Medien NRW GmbH v Bundesrepublik Deutschland* EU:C:2019:623, para 19.
[81] *Infopaq*, para 45.
[82] *Cofemel*, para 30. For instance, the fact that a subject matter is regarded as aesthetic does not, in itself, make it original. See *Cofemel*, para 54.

add ‘important significance’ to the data within the database through their labour is irrelevant to the originality requirement.[83] Furthermore, it is crucial to bear in mind that the legal object of protection under copyright is not the data itself, but the database that contains it, essentially the ‘external shell’. The focus must remain strictly on the selection or arrangement of the data. Consequently, for the purposes of copyright assessment, the intellectual effort and skill employed in the creation of the data contained within the database are irrelevant to this evaluation.[84] However, one must distinguish this from the significant labour and effort involved in the production of the database itself (i.e., the gathering and organizing). While the former (creation of data) is entirely irrelevant from a copyright perspective, the latter (creation of the database) was historically sufficient to extend the copyright umbrella over databases under the ‘sweat of the brow’ doctrine, as mentioned above.

Nevertheless, with the *Football Dataco* decision, it was definitively established that the significant labour and skill deployed in the setting up of the database cannot, in itself, justify copyright protection.[85] In other words, mere labour does not satisfy the harmonised originality threshold.

Finally, it must be noted that originality is precluded if the design or structure (realisation) of the subject-matter is dictated solely by technical considerations, rules, or constraints, which leave no room for creative freedom.[86] Yet, this does not imply that the presence of technical considerations entirely prevents copyrightability. On the contrary, as long as the subject matter reflects the author’s personality – meaning the author still had room for choice despite the

[83] *Football Dataco*, para 41.
[84] *Football Dataco*, paras 30-33. The case concerned a compilation of fixture lists for English and Scottish football leagues. The claimants argued that the database should be protected due to the significant labour and skill required to create the lists (the data itself) – a process involving immense effort to avoid clashes and meet organizational rules. The Court clarified that this effort related to the creation of data, not its selection or arrangement.
[85] *Football Dataco*, para 46.
[86] *Cofemel*, para 31.

constraints – it may be eligible for protection even if its realisation has been influenced by technical considerations.[87]

Consequently, the bar for copyright protection in databases is relatively high. 'Comprehensive' databases, such as telephone directories, which aim to include all available information (lacking creative selection) and organize it alphabetically or chronologically (lacking creative arrangement), generally fail to meet the condition of the author's own intellectual creation.[88] Such databases must rely on the sui generis right for protection, provided they meet the relevant conditions.

2.2.2. Ownership and Authorship Issues

The Directive provides limited guidance regarding the fundamental issues of authorship and ownership. While Article 4(1) establishes the principle that the author of a database is the natural person or group of natural persons who created it, it simultaneously allows Member States to designate 'legal persons' (i.e., companies) as authors where national legislation permits. Consequently, the issue of authorship and initial ownership, which is often regarded as one of the most problematic areas in EU copyright law, has been left to the discretion of Member States, despite its crucial importance for the proper functioning of the internal market.[89]

Interestingly, this stands in stark contrast to the approach taken for the sui generis right. By introducing a harmonized definition of the 'maker of the database' (which generally vests rights in the investor), the Directive occupies a rare position within EU copyright directives, offering

[87] Case C-833/18 *SI and Brompton Bicycle Ltd v Chedech / Get2Get* EU:C:2020:461, para 26.
[88] Derclaye (n 5) 45.
[89] Michal Koscik and Matej Myska, 'Database Authorship and Ownership of Sui Generis Database Rights in Data-Driven Research' (2017) 31 Int'l Rev L Computers & Tech 43, 47-51.

a level of harmonization regarding ownership for the investment-based right that is absent from the copyright regime.[90]

Regarding collaborative efforts, Article 4(3) stipulates that where a database is created by a group of natural persons jointly, the exclusive rights shall be owned jointly. However, the Directive fails to regulate the practical exercise of these rights. Crucial operational details, such as whether a single joint author can exercise rights unilaterally or to what extent, how revenue is to be distributed, or how disputes between joint authors are to be resolved, are noticeably absent.[91] These matters fall entirely within the competence of Member States. However, research indicates that significant discrepancies exist among national regulations regarding these issues.[92] This legal fragmentation is likely to generate substantial legal conflicts, particularly in the context of cross-border collaborative projects involving authors from multiple Member States.

A critical interpretive dilemma arises when reading Article 4(3) in conjunction with Article 4(1). While Article 4(1) permits Member States to designate legal persons as authors, Article 4(3) explicitly refers only to a 'group of natural persons' regarding joint ownership. This discrepancy leaves the legal status of collaborative efforts between legal persons (e.g., two companies) ambiguous. Two competing interpretations can be advanced regarding this silence. On one hand, a systematic reading suggests that Article 4(3) should be read in light of Article 4(1), meaning that where national legislation permits corporate authorship, the principle of joint ownership should apply *mutatis mutandis* to legal persons collaborating on a database. On the other hand, a strict literal interpretation of Article 4(3) implies that the limitation to 'natural persons' is intentional, thereby creating a legislative gap. This would suggest that Member

[90] Paul Goldstein and P Bernt Hugenholtz, *International Copyright: Principles, Law, and Practice* (4th edn, Oxford University Press 2019) 230.
[91] Koscik and Myska (n 89) 52.
[92] ibid.

States retain the discretion to adopt different ownership rules for joint corporate works, rather than being bound by the joint ownership mandate of the Directive. The lack of CJEU case law on this specific point leaves the matter legally uncertain.

Finally, regarding perhaps the most economically significant aspect, databases created by employees, the Directive remains notably silent, leaving the matter entirely to the discretion of Member States.[93] This silence represents a missed opportunity for harmonization.

It is necessary to draw attention to the potential overlaps inherent in the dual regime presented by the Directive regarding authorship and ownership. Under Article 7(4), the sui generis right is granted irrespective of the eligibility of that database for protection by copyright or by other rights. Moreover, the existence of the sui generis right is independent of whether the contents of the database are protected by copyright or otherwise.[94] Consequently, it is legally possible for the sui generis right to vest in one subject (e.g., the investor/employer) while the copyright in the structure vests in another (e.g., the author/employee). This creates two fundamental problems.

First, a 'licensing deadlock' may arise where the sui generis right owner and the copyright owner must obtain licenses from one another to fully exploit the database.[95] This is particularly problematic in Member States where national laws do not automatically vest the rights to employee creations in the employer.

[93] Database Directive, recital 29.
[94] This was not the case in the initial legislative attempt. The Proposal contained a contrary provision, stipulating that the sui generis right would not apply to the contents if the contents of the database were already protected by copyright or neighbouring rights. See First Proposal (n 58) art 2(4).
[95] Nuno de Araújo Sousa e Silva, *The Ownership Problems of Overlaps in European Intellectual Property* (1st edn, Nomos Verlagsgesellschaft mbH 2014) 58 <http://www.jstor.org/stable/j.ctv941rmt> accessed 12 January 2026.

Second, this overlap creates significant legal uncertainty for third-party users. A user might face difficulties if they obtain a license from only one of the relevant right-holders, leaving them vulnerable to infringement claims from the other.[96]

It is noteworthy that the Commission's initial Proposal had envisaged a specific provision for databases created by employees. The original draft stipulated that where a database is created by an employee in the execution of their duties or following the instructions given by their employer, the employer would be entitled to exercise all economic rights, unless otherwise provided by contract.[97] However, this provision was subsequently removed from the final text, expressly excluding this critical issue from the scope of harmonization.

2.2.3. Scope of Protection and Exceptions

Once a database qualifies for copyright protection by meeting the originality threshold, the author is granted a bundle of exclusive economic rights. However, these rights are balanced against the legitimate interests of lawful users to access and use the information with certain exceptions.

Article 5 of the Directive enumerates the exclusive rights of the author, which cover the restricted acts concerning the expression of the database. The author has the exclusive right to authorise or prohibit:

i. **Reproduction:** Temporary or permanent reproduction by any means and in any form, in whole or in part.
ii. **Adaptation:** Translation, adaptation, arrangement, and any other alteration.

[96] ibid. As the author notes, the *Directmedia* case illustrates a scenario involving a German poetry anthology where different rightholders held the copyright and the sui generis right. See Case C-304/07 *Directmedia Publishing GmbH v Albert-Ludwigs-Universität Freiburg* EU:C:2008:552.
[97] First Proposal (n 58), art. 3(4).

iii. **Distribution:** Any form of distribution to the public of the database or of copies thereof.

iv. **Communication to the Public:** Any communication, display, or performance to the public.

It is imperative to reiterate that these exclusive rights apply strictly to the structure of the database. They do not extend to the data contained within. However, the data contained within the database might effectively be protected by separate copyright or related rights belonging either to third parties or to the creator of the database. Article 3(2), read in conjunction with Recital 27, clarifies that the rights over those contents are not affected by the existence of a separate copyright protection on the structure of the database. Consequently, a third party who extracts the contents of a copyright-protected database and rearranges them into a completely different structure does not infringe the copyright in the database. Nevertheless, such an act is not devoid of legal consequences. Depending on the circumstances, this extraction may still constitute an infringement of the sui generis right, as will be discussed in the following section, or violate any independent copyright or related rights subsisting in the content itself.

Regarding the right of distribution, Article 5(c) explicitly incorporates the principle of exhaustion of rights. It stipulates that the first sale in the Community of a copy of the database by the rightholder or with his consent shall exhaust the right to control resale of that copy within the Community. However, a crucial distinction must be made regarding the digital environment. While the exhaustion principle applies to the sale of tangible copies, it generally does not apply to online databases. This is because the supply of a database online is considered a service, rather than the distribution of a good.[98]

[98] Database Directive, recital 33.

It should also be noted that the Directive focuses exclusively on the harmonization of economic rights. It remains silent on moral rights (such as the right to paternity or integrity), leaving these to be governed by the national legislation of Member States in accordance with the Berne Convention.[99]

Exceptions and Limitations

The Directive establishes a balance between protection and access through Article 6, which creates a distinction between mandatory and optional exceptions.

The most critical restriction on the author's rights is the mandatory exception for the lawful user under Article 6(1). This provision stipulates that the performance of any of the restricted acts listed in Article 5 is not subject to authorisation by the author where it is necessary for the lawful user to access the contents of the database and use it for normal purposes. This provision seems to describe the normal exploitation of a database rather than introducing an exception; it ensures that the copyright in the structure cannot be used to practically block access to the data itself. On the other hand, a degree of ambiguity remains regarding the beneficiary of this right. The Directive does not provide an explicit definition of the term 'lawful user'. In the absence of a statutory definition, the concept is generally understood to encompass any person who has lawfully acquired a right to use the database, whether through a contractual license or a legitimate purchase.[100] Crucially, Article 15 of the Directive declares that any contractual term contrary to this provision shall be null and void. Thus, a database vendor cannot legally enforce a contract that prohibits a lawful purchaser from performing technical acts (like temporary reproduction) required to consult the database.

[99] Database Directive, recital 28.
[100] Davison (n 14) 77-78.

Article 6(2) grants Member States the discretion to introduce specific exceptions. However, it is argued that these optional exceptions simultaneously operate to restrict the legislative freedom of Member States by establishing an exhaustive framework.[101]

Most critically, the Directive permits Member States to allow exceptions for reproduction for private purposes exclusively for non-electronic databases.[102] Consequently, reasoning *a contrario,* it is deduced that Member States are strictly precluded from granting a private copying exception for electronic databases. This distinction reflects the legislator's concern regarding the ease with which electronic databases can be copied and distributed.

Another significant option is the exception for the 'sole purpose of illustration for teaching or scientific research'.[103] In this context, 'scientific research' is interpreted broadly to encompass both the natural and human sciences.[104] However, its application is subject to a strict condition: it applies only to the extent justified by the non-commercial purpose to be achieved. It is crucial to note that this framework has been modernized by the CDSM Directive. Article 5 of the CDSM Directive establishes a mandatory exception for the digital use of databases solely for the purpose of illustration for teaching. This exception applies subject to strict conditions: the use must be for non-commercial purposes, and the activity must take place under the responsibility of an educational establishment (e.g., on secure electronic networks accessible only by the educational community). This modernization ensures that databases can be utilized in contemporary educational settings, such as virtual classrooms, with greater legal certainty. It should be emphasised that, while the illustration for teaching exception under the Database Directive is optional, Article 5(1) of the CDSM Directive introduces a mandatory exception.

[101] Reichman and Samuelson (n 25) 77.
[102] Database Directive, art. 6(2)a
[103] Database Directive, art. 6(2)b
[104] Database Directive, recital 36.

Furthermore, Member States are permitted to retain other traditionally authorized copyright exceptions under national law, provided these do not expand the scope of the specific exceptions laid out in Article 6.[105] Finally, the discretion of Member States is further curtailed by Article 6(3), which incorporates the principles of the 'three-step test', which was first introduced by Article 9(2) of the Berne Convention.[106] Accordingly, any exception applied must not unreasonably prejudice the rightholder's legitimate interests or conflict with the normal exploitation of the database.

Furthermore, the CDSM Directive introduced other critical mandatory exceptions applicable to databases. Notably, Article 6 allows cultural heritage institutions to make copies of works, including databases, for the purpose of preservation, thereby ensuring the long-term survival of cultural assets.

Finally, and perhaps most significantly for the data economy, the CDSM Directive introduced specific exceptions for text and data mining (TDM) under Articles 3 and 4. Given the pivotal role of TDM in the context of the databases, this specific regime will be analyzed exclusively in Section 2.4.

Term of Protection

The Database Directive does not establish a distinct term of protection for copyright in databases. Instead, it refers to the general EU framework.[107] Consequently, the duration is governed by the provisions of the Term Directive (2006/116/EC)[108].

[105] Database Directive, art.6(2)d
[106] Daniël Jongsma, 'The Nature and Content of the Three-Step Test in EU Copyright Law: A Reappraisal' in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021) 338, 339.
[107] Database Directive, art 2(c).
[108] Directive 2006/116/EC of the European Parliament and of the Council of 12 December 2006 on the term of protection of copyright and certain related rights [2006] OJ L 372/12 (*Term Directive*).

Since databases are assimilated to literary works under the Berne Convention, the standard term applies to them. Accordingly, the protection lasts for the life of the author plus 70 years after their death.[109] This period is calculated from the first of January of the year following the death of the author.[110]

2.3. The Sui Generis Right for Databases

2.3.1. Concept and Legal Nature of the Right

The core of the sui generis regime is established in Article 7 of the Directive, which confers a right on the maker of a database to prevent acts of extraction and/or re-utilisation of the whole or a substantial part of its contents. Unlike copyright, this protection is not conditional upon creativity or originality. Instead, the sole prerequisite is that there has been qualitatively and/or quantitatively a 'substantial investment' in either the obtaining, verification, or presentation of the contents.

The introduction of the sui generis right represents the most innovative and controversial aspect of the Directive. It was unprecedented in the field, marking the first time a legal instrument created a distinct form of protection for databases beyond traditional copyright.[111] This novelty provoked serious debate, with critics arguing that the right was anti-competitive and unbalanced.[112] Concerns were raised that the economic justifications for its introduction were not satisfactorily explained,[113] and that by granting database developers a strong monopoly, the Directive jeopardized basic scientific research.[114]

[109] Term Directive, art 1(1).
[110] Term Directive, art 8.
[111] Philip J. Cardinale, 'Sui Generis Database Protection: Second Thoughts in the European Union and What It Means for the United States' (2006-2007) 6 Chi-Kent J Intell Prop 157, 158.
[112] Reichman and Samuelson (n 25) 81.
[113] Mark Powell, 'The European Union's Database Directive: An International Antidote to the Side Effects of Feist?' (1996) 20 Fordham Int'l L J 1215, 1225
[114] Reichman and Samuelson (n 25) 55.

The legal classification of the sui generis right is complex. First of all its rationale, which is preventing the misappropriation of investment, suggests a kinship with unfair competition law. Indeed, this connection was explicitly reflected in the legislative history. The Commission's initial Proposal envisaged a regime focused on preventing 'unfair extraction' and restricted the scope of protection specifically to acts undertaken for commercial purposes.[115] This initial draft was clearly designed as a remedy against unfair market practices rather than a property right. However, during the legislative process, the nature of the right underwent a fundamental transformation. The final text of the Directive abandoned the 'unfair extraction' terminology and the commercial purpose limitation. Instead, it established a robust, transferable exclusive intellectual property right.[116] This distinction is critical: unlike unfair competition rules, which typically require a competitive relationship, an act of bad faith, or market confusion, the *sui generis* right operates as a transferable exclusive property right. It grants the maker an absolute monopoly over a substantial part of the database contents, exercisable against any third party regardless of their competitive status.[117]

Although the Directive does not explicitly categorize it as such, the sui generis right bears striking similarities to neighbouring rights (related rights), such as those granted to phonogram producers or broadcasters. First of all, both the sui generis regime and the neighbouring rights framework share a common teleological foundation: they aim to protect substantial investment rather than artistic creation.[118] Indeed, this affinity is not merely theoretical. During the

[115] First Proposal (n 58), arts 2 and 8.
[116] Derclaye (n 5) 51-52.
[117] See, contra Derclaye (n 5) 107 (stating that sui generis right is an anti-copying right, not a monopoly right, as it is limited to extraction and re-utilisation from the database, and one can independently make a similar database with the same information)
[118] Garrigues (n 13) 3.

transposition of the Directive, the sui generis right was explicitly codified or referred to as a neighbouring or related right within the national legislation of numerous Member States.[119]

However, despite these functional similarities, significant divergences prevent the classification of the sui generis right merely as another neighbouring right. Most notably, the term of protection is limited to 15 years.[120] This duration is significantly shorter than the standard term typically granted to neighbouring rights, such as the 50-year protection afforded to phonogram producers.[121]

Furthermore, there is a lack of uniformity in national implementation. It cannot be claimed that all Member States transposed this right as a 'related' or 'neighbouring' right within their domestic legal systems.[122] Finally, the legislative intent must also be considered. The Directive deliberately avoids the label 'related right', opting instead for the term sui generis – meaning 'of its own kind' – to delineate a sharp distinction from both copyright and existing related rights frameworks.

In light of these considerations, the most accurate characterization is to regard the sui generis right as a truly unique, standalone form of intellectual property right.

2.3.2. The Requirement of Substantial Investment

Given that the primary rationale of the sui generis right is to protect the investment of the database maker, demonstrating the existence of such investment is the fundamental prerequisite for eligibility. However, securing this protection is not straightforward, as Article 7(1) of the Directive requires the investment to be of a certain weight and to fulfill specific conditions.

[119] Stephen Kon and Thomas Heide, 'BHB/William Hill – Europe's Feist' (2006) 28(1) EIPR 60, 64; Goldstein and Hugenholtz (n 90) 224.
[120] Database Directive, art 10.
[121] Term Directive, art 3.
[122] Goldstein and Hugenholtz (n 90) 224.

Accordingly, protection is granted only to the maker of a database who demonstrates that there has been qualitatively and/or quantitatively a substantial investment in either the obtaining, verification, or presentation of the contents.

It is crucial to note that the concept of investment is not interpreted solely as financial expenditure. Indeed, investment is understood broadly to encompass the expending of time, effort, and energy. These non-monetary elements are capable of constituting a substantial investment entirely on their own, or they may operate in combination with financial deployment.[123]

Furthermore, the Directive establishes a flexible threshold by allowing the investment to be assessed either quantitatively and/or qualitatively. Quantitative investment refers to the quantifiable resources, such as the deployment of measurable financial resources, time, and effort. It essentially covers the cost of production. Qualitative investment refers to the deployment of professional expertise, technical skill, or intellectual effort or energy, regardless of the financial cost involved.[124]

It is important to note that these criteria could be applied either cumulatively or alternatively; a database may rely on massive financial expenditure (quantitative) or highly specialized expert selection (qualitative) to qualify. However, Recital 19 clarifies that the investment must be substantial; protection is not intended for databases that require only trivial effort or cost.[125]

[123] Database Directive, recital 40.
[124] Case C-46/02 *Fixtures Marketing Ltd v Oy Veikkaus Ab* EU:C:2004:694 (*Fixtures Marketing v Oy Veikkaus*), para 38; Case C-338/02 *Fixtures Marketing Ltd v Svenska Spel AB* EU:C:2004:696 (*Fixtures Marketing v Svenska Spel*), para 28; *Fixtures Marketing v OPAP* (n 64), para 44.
[125] However, this may not have fully translated into practice; see Stephen M Maurer, P Bernt Hugenholtz and Harlan J Onsrud, 'Europe's Database Experiment' (2001) 294 Science 789 (noting that European courts have perceived this standard as fairly low, and even trivial databases consisting of 251 hyperlinks have been protected).

Nevertheless, the Directive avoids prescribing a specific minimum threshold or a fixed monetary amount for an investment to be deemed 'substantial'. First and foremost, as previously noted, investment is not strictly limited to measurable financial resources; it may also be qualitative in nature. Furthermore, had a specific monetary threshold been established, it would have necessitated constant legislative updates to maintain the Directive's relevance against economic fluctuations, and thus, such a provision would have rendered the regulation impractical and rigid.

Three Types of Investment and the Spin-off Doctrine

Article 7(1) specifically enumerates three activities where this investment must be directed. For protection to arise, the substantial investment must occur in either the obtaining, verification or presentation of the contents.

Within the meaning of this provision, 'obtaining' refers to the resources used to seek out and collect existing independent materials.[126] It involves the gathering of data from external sources. A critical interpretation regarding 'obtaining' was established by the CJEU in the *British Horseracing Board (BHB)* and *Fixtures Marketing* cases, partially adopting the so-called 'spin-off' doctrine. Originally developed by the courts in the Netherlands,[127] this doctrine limits the eligibility of 'spin-off' or 'by-product' databases generated within the scope of an entity's principal activity, by drawing a sharp distinction between the creation of data and the obtaining of data.[128] The underlying reason for this distinction must be sought in the fundamental rationale

[126] Case C-203/02 *The British Horseracing Board Ltd and Others v William Hill Organization Ltd* EU:C:2004:695 (*British Horseracing Board*), para 31.
[127] John Edwards, 'Has the Dreaded Data Doomsday Arrived: Past, Present, and Future Effects of the European Union's Database Directive on Database and Information Availability in the European Union' (2004) 39 Ga L Rev 215, 239; Xuqiong (Joanna) Wu, 'E.C. Database Directive' (2002) 17(1) Berkeley Tech LJ 571, 581; P Bernt Hugenholtz, 'Abuse of Database Right: Sole-source Information Banks under the EU Database Directive' 6 <https://www.ivir.nl/publicaties/download/abuseofdatabaseright.pdf> accessed 12 January 2026.
[128] Amar A Hasan, 'Sweating in Europe: The European Database Directive' (2005) 9 Computer L Rev & Tech J 479, 486.

of the Directive. Indeed, conferring such a valuable intellectual property right upon by-products would be inconsistent with the Directive's core objective.[129] The primary aim of the Directive was to stimulate and protect investment in information storage and processing systems,[130] rather than to reward the generation of data that occurs naturally as a result of other activities.

As mentioned above, this distinction was cemented in four landmark judgments delivered simultaneously on 9 November 2004. Although the cases involved different parties, they shared a similar factual matrix and resulted in a unified interpretation of the Directive. In the *Fixtures Marketing* cases, the dispute centered on the use of English and Scottish football league fixture lists by betting organizations. Fixtures Marketing Ltd argued that the preparation of these lists required significant investment due to the complexity of the task. They highlighted the need to account for numerous constraints, such as ensuring the alternation of home and away matches, preventing clubs from the same town from playing at home simultaneously, and coordinating with police availability.[131] Similarly, in the *BHB* case, the claimant was the governing body for the British horse racing industry and maintained a comprehensive database containing information on racecourses, horses, jockeys, and race times. The BHB argued that the vast financial resources incurred in the organization and administration of horse racing, without which the data would not exist, should be considered as substantial investment in obtaining the contents of the database.[132] However, the CJEU categorically rejected these arguments in all four cases. The Court held that the resources utilized for the preparation of fixture lists or the organization of races constituted an investment in the creation of the data, not in its obtaining.[133]

[129] *British Horseracing Board* (n 126), para 31; Hugenholtz (n 127) 6-7.
[130] Database Directive, recitals 10-12.
[131] *Fixtures Marketing v Oy Veikkaus* (n 124), para 10; *Fixtures Marketing v Svenska Spel* (n 124), para 31; *Fixtures Marketing v OPAP* (n 64), para 47.
[132] *British Horseracing Board* (n 126), paras 14 and 37.
[133] ibid para 38; *Fixtures Marketing v Oy Veikkaus* (n 124), para 42; *Fixtures Marketing v Svenska Spel* (n 124), para 31; *Fixtures Marketing v OPAP* (n 64), para 47.

Since the data was a direct result (or a by-product) of the principal activity, the investment was directed at the sporting events itself rather than the database.

'Verification', on the other hand, relates to the resources used to ensure the accuracy and reliability of the information contained in the database. It includes the monitoring of the accuracy of the materials during the operation of the database. However, a crucial distinction must be drawn here regarding the source of the data. The CJEU ruled that resources utilized for verification during the stage of the creation of data or other materials must be considered as an investment directed at the creation of those materials. Consequently, such resources cannot be taken into account when assessing whether a substantial investment has been made within the meaning of Article 7(1) of the Directive. Essentially, checking the accuracy of self-created data is an inseparable part of the creation process itself, rather than an independent investment in verification.[134]

Finally, 'presentation' covers the resources invested in giving the database its function and form.[135] This could include the design of the user interface, the indexing system, or the means of retrieving information.[136]

It is important to note, however, that the CJEU did not adopt the 'spin-off' doctrine in its absolute form.[137] The Court clarified that the mere fact that a database is a by-product of a principal activity does not *per se* render it ineligible for protection.[138] In other words, the Court rejected the strict application of the doctrine where spin-off databases were automatically excluded. Instead, the Court drew a sharp distinction between the creation of data and the obtaining of data. The ruling dictates that resources deployed for the creation of materials are

[134] *British Horseracing Board* (n 126), para 34.
[135] *Fixtures Marketing v Oy Veikkaus* (n 124), para 37
[136] Derclaye (n 5) 98.
[137] Martin Husovec, 'The End of (Meta) Search Engines in Europe?' (2014) 14 Chi-Kent J Intell Prop 145, 151.
[138] *Fixtures Marketing v OPAP* (n 64), para 45.

excluded from the calculation of substantial investment.[139] This distinction is vital to prevent the establishment of monopolies over raw information, particularly in databases that consist of 'synthetic' data, where the material is created by the maker of the database itself (such as telephone subscriber numbers) and, therefore, cannot be independently rediscovered or collected from elsewhere.[140] If the sui generis right were to protect the creation of such data, it would effectively grant a monopoly over the facts themselves, as copying from the database would remain the only viable option for competitors.[141] A similar situation arises in the context of 'sole-source' databases, where the database maker is the exclusive source of the information, rendering independent collection impossible.[142]

Public Sector Information

The application of the sui generis right to public sector information becomes even more complex when the nature of the 'maker' is considered. The Directive does not explicitly preclude governmental bodies from exercising the sui generis right. On the contrary, practice has shown that government agencies and authorities effectively assert this right over their databases.[143] However, this practice is controversial, primarily regarding the first requirement of 'substantial investment'. Fundamentally, governmental authorities do not make an 'investment' in the commercial sense; rather, they perform a public duty using public funds.[144] Even if the state argues that an investment has been made, the application of the spin-off doctrine suggests that most of the state-created databases are merely by-products of a principal activity, which is essentially a public service. Furthermore, since the state utilizes taxpayer

[139] *British Horseracing Board* (n 126) para 35.
[140] Maurer, Hugenholtz and Onsrud (n 125) 789.
[141] ibid; Edwards (n 127) 240.
[142] G M Hunsucker, 'The European Database Directive: Regional Stepping Stone to an International Model?' (1997) 7 Fordham Intell Prop Media & Ent LJ 697, 749-750.
[143] See, for example Case C-138/11 *Compass-Datenbank GmbH v Republik Österreich* EU:C:2012:449 (*Compass-Datenbank*).
[144] Derclaye (n 5) 74.

money, preventing the information collected as a result of state activities from entering the public domain and instead monetizing it raises the issue of 'double payment'.[145] Taxpayers effectively pay once for the collection of the data (through taxes) and a second time to access or re-use it. While it is acknowledged that certain governmental organizations may be fully or partially funded by private sources,[146] such instances are relatively rare and do not suffice to resolve the fundamental conceptual confusion regarding the nature of public investment. Consequently, it is argued that state-made databases should not benefit from sui generis protection.

The protection of databases generated by governmental bodies often mirrors the monopoly situation seen in 'sole-source' databases. The European Commission had, in fact, recognized this danger of monopolization early on.[147] In the First Proposal of the Directive, a specific provision was included to prevent abuse: a compulsory licensing scheme. Accordingly, the First Proposal stipulated that the right to extract and re-utilize the contents must be licensed on fair and non-discriminatory terms if the database is made publicly available by a public body established to assemble or disclose information pursuant to legislation.[148] However, this safeguard was subsequently removed from the final text.

The complexity deepens when examined through the lens of competition law. In *Compass-Datenbank*, the CJEU ruled that a public entity collecting data – and exercising a sui generis right over the database created with that data – in the exercise of its statutory powers acts as a public authority, not as an 'undertaking' engaged in economic activity within the meaning of

[145] J H Reichman and Paul F Uhlir, 'Database Protection at the Crossroads: Recent Development and Their Impact on Science and Technology' (1999) 14 Berkeley Tech LJ 793, 810.
[146] Estelle Derclaye and Martin Husovec, 'Sui Generis Database Protection 2.0: Judicial and Legislative Reforms' (2022) 44(6) EIPR 323, 326-327.
[147] Hugenholtz (n 127) 4.
[148] First Proposal (n 58), art 8(2).

Article 102 TFEU.[149] Although the Court did not explicitly rule on the validity of the sui generis right itself, this reasoning created a legal paradox. On one hand, the 'spin-off' logic suggests that public data (a by-product of statutory duties) should lack protection. On the other hand, the non-application of competition law creates a risk of unchecked monopoly: the public body exercises a right whose fundamental rationale is economic (protection of investment), yet the Court rules that this exercise does not constitute an economic activity. This contradiction poses a risk of leaving the data locked up without the safeguards of competition law.

To address this impasse, legislative intervention is required. The issue is now partially addressed in the Open Data Directive (EU) 2019/1024[150]. Accordingly, the exercise of sui generis rights by public sector bodies is strictly limited to prevent the prohibition of re-use.[151] However, the Open Data Directive does not introduce a general obligation to allow the re-use of public information.[152]

2.3.3. Scope of Protection: Extraction and Re-utilisation

Upon establishing the existence of a substantial investment, the maker of a database acquires the right to prevent acts that misappropriate that investment. Article 7(1) of the Directive defines the scope of this protection by granting the maker the exclusive right to prohibit the extraction and/or re-utilisation of the whole or a substantial part of the contents of that database. These two concepts (extraction and re-utilisation) constitute the core prerogatives of the sui

[149] *Compass-Datenbank* (n 143), paras 46-47.
[150] Directive (EU) 2019/1024 of the European Parliament and of the Council of 20 June 2019 on open data and the re-use of public sector information (recast) [2019] OJ L 172/56.
[151] ibid art 1(6).
[152] ibid recital 26.

generis right. The CJEU has consistently held that these terms must be interpreted broadly to ensure that the Directive's objective of protecting the maker's investment is fully realized.[153]

It is crucial to clarify that although the act of 'extraction' bears conceptual similarities to the traditional copyright right of reproduction, and 're-utilisation' broadly parallels the right of communication to the public (and distribution), it must be emphasized that these concepts do not fully overlap.[154] Consequently, they should not be conflated. Indeed, as will be demonstrated below, the sui generis regime affords a broader scope of protection than that of traditional copyright – an ironic outcome given that copyright protection demands a significantly higher degree of intellectual effort and creativity.[155]

Extraction

Extraction corresponds to the 'transfer of the contents'. According to Article 7(2)(a), it is defined as "*the permanent or temporary transfer of all or a substantial part of the contents of a database to another medium by any means or in any form*".

This definition covers any act of copying or misappropriating the data.[156] Crucially, the technical process used is irrelevant; extraction occurs whether the transfer is done electronically, mechanically, or even manually. The concept even encompasses the removal of contents in any manner; consequently, downloading the contents or simply writing them down

[153] *British Horseracing Board* (n 126), para 51; Case C-304/07 *Directmedia Publishing GmbH v Albert-Ludwigs-Universität Freiburg* EU:C:2008:552 (*Directmedia*), para 31; Case C-202/12 *Innoweb BV v Wegener ICT Media BV and Wegener Mediaventions BV* EU:C:2013:850 (*Innoweb*), para 38.
[154] Estelle Derclaye, 'The Database Directive' in Irini Stamatoudi and Paul Torremans (eds), EU Copyright Law (Edward Elgar Publishing 2021) 216, 235; compare Davison (n 72) 833-834.
[155] Mark Davison, 'Database Protection: The Commodification of Information' in Lucie Guibault and P Bernt Hugenholtz (eds), *The Future of Public Domain: Identifying the Commons in Information Law* (Kluwer Law International 2006) 167, 170; Paula Baron, 'Back to the Future: Learning from the Past in the Database Debate' (2001) 62 Ohio St LJ 879, 908; Davison (n 14) 88-89.
[156] *Directmedia* (n 153), para 31.

by hand amounts to an act of extraction.[157] Indeed, in *Directmedia*[158], the CJEU clarified that the manual transcription of data from a database constitutes extraction, provided that the data is transferred to another medium.[159] Therefore, the concept focuses on the result (the transfer of data) rather than the method. Similarly, the subsequent re-arrangement of the extracted data does not preclude the finding of an infringement. In other words, the protection afforded by the sui generis right must not be interpreted as being limited to protection against a simple 'copy-paste' process.[160]

Crucially, the Directive specifies that the on-screen display of the contents of a database constitutes an act of extraction subject to authorization.[161] This is grounded in the technical reality that such a display necessitates the permanent or temporary transfer of all or a substantial part of the contents to another medium (e.g., the RAM of a computer).[162]

In the modern digital landscape, where the vast majority of databases are accessed online, this broad definition has significant legal implications. Since consulting an electronic database inevitably involves the creation of temporary copies in the working memory, the right of extraction effectively evolves into a mechanism that controls the act of accessing the database itself.[163] Consequently, even transient operations performed during online access fall within the ambit of the sui generis right, ensuring that no technical loophole allows for the misappropriation of contents without permanent storage.

[157] Derclaye (n 154) 235.
[158] See (n 153).
[159] *Directmedia* (n 153), paras 36-37.
[160] ibid paras 39-40.
[161] Database Directive, recital 44.
[162] *Directmedia* (n 153), para 53; Laurence Kaye, 'The Proposed EU Directive for the Legal Protection of Databases: A Cornerstone of the Information Society?' (1995) 17(12) EIPR 583, 585.
[163] Davison (n 14) 87.

Re-utilisation

Re-utilisation, on the other hand, refers to the 'making available to the public'. Defined in Article 7(2)(b), it encompasses "*any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission*".

While extraction is about the copying of data (internal or external), re-utilisation is fundamentally about the dissemination of that data to the public. This right allows the database maker to control the market and prevent unauthorized third parties from providing access to the database's contents.[164] A key limitation on this right is established by the exhaustion doctrine. The first sale of a copy of the database within the Community exhausts the right to control resale of that copy within the Community.[165] However, the right to prohibit re-utilization is not exhausted in the case of online transmission, even if the user makes a material copy of the database with the rightholder's consent.[166] Furthermore, public lending is explicitly excluded from being classified as an act of extraction or re-utilisation.[167]

Re-utilisation also extends to the activities of meta-search engines, particularly where they enable the searching of a database's contents in a manner that functions "*like a query entered directly in that database*".[168] According to the CJEU, in such cases, the meta-search engine translates the user's request into the database's specific search command in real-time, thereby appropriating the investment of the maker.[169] Conversely, it can be argued that this broad interpretation does not encompass all forms of linking. For instance, the acts of meta-search

[164] Derclaye (n 5) 105.
[165] Database Directive, art 7(2)b.
[166] ibid recital 43.
[167] ibid art 7(2).
[168] *Innoweb* (n 153), para 53. Meta-search engines are defined as services enabling search across multiple databases or web search engines, including services such as Skyscanner or Trivago. For detailed information, see Husovec (n 136).
[169] *Innoweb* (n 153), para 54.

engines that merely redirect users to the supplier's homepage, or simple deep linking that does not involve the real-time translation of search queries or the substitution of the original search interface, would not constitute re-utilisation within this specific meaning.[170]

The Concept of a 'Substantial Part'

The protection granted by Article 7(1) is not absolute; it applies only when the extraction or re-utilisation concerns the whole or a 'substantial part' of the database. Since the Directive does not define this threshold numerically, the CJEU provided definitive guidance in the *BHB* judgment, establishing a dual test based on quantitative and qualitative criteria.[171]

The quantitative assessment refers to the volume of the data extracted or re-utilised in relation to the total volume of the contents of the database. According to the Court, this implies the extraction of a large amount of data that is significant in absolute terms or relative to the size of the database.[172] However, there is no fixed percentage that automatically triggers infringement; it is a case-by-case assessment.

More importantly, a part may be considered substantial even if it is quantitatively small (e.g., a single crucial piece of data), provided that it represents a significant human, technical, or financial investment. The Court ruled that the 'qualitative' substantiality must be assessed in terms of the scale of the investment in the obtaining, verification, or presentation of that specific part.[173] Crucially, the intrinsic value of the materials is irrelevant in this assessment. The Court

[170] Husovec (n 137) 165-166; Derclaye (n 5) 107.
[171] *British Horseracing Board* (n 126), para 69.
[172] ibid para 70.
[173] ibid para 71.

does not rely on the commercial value of the extracted part, but rather on the investment (or production cost) incurred to produce it.[174]

Therefore, the 'substantiality' here lies not in the substantive nature of the material itself, but in the magnitude of the investment it represents. In essence, the CJEU has adapted the concept of 'substantial investment' required for eligibility under Article 7(1) to the infringement test by mirroring the initial investment requirement in the assessment of the breach.[175] The Court justifies this approach by referencing Recital 42, recalling that the specific purpose of the sui generis right is to safeguard the maker's investment against acts by users that result in 'significant detriment' to that investment.[176] Furthermore, the Court emphasized that a contrary interpretation, one based on the intrinsic value of the data, would risk granting a proprietary right over the data itself, a result clearly not intended by the Directive.[177]

Repeated and Systematic Extraction

While Article 7(1) prohibits the taking of substantial parts, Article 7(5) addresses the opposite scenario, which is the extraction of insubstantial parts. Normally, a user is free to extract insubstantial parts. However, this freedom is not unlimited.

Article 7(5) prohibits the 'repeated and systematic extraction and/or re-utilisation of insubstantial parts of the contents of the database implying acts which conflict with a normal exploitation of that database or which unreasonably prejudice the legitimate interests of the maker'. The definition of an insubstantial part is determined essentially via a process of elimination. Any part of the contents of a database that does not qualify as a substantial part, as

[174] ibid para 72; Mireille van Eechoud, 'Database Rights in the EU's Data Strategy: A Question of Sport?' in Natalie Helberger and others (eds), *Intellectual Property and Sports: Essays in Honour of P Bernt Hugenholtz* (Information Law Series vol 46, Kluwer Law International 2021) 251, 257.
[175] Hasan (n 128) 497-498; Derclaye (n 5) 111.
[176] *British Horseracing Board* (n 126), para 69.
[177] ibid para 72.

evaluated under the quantitative and qualitative tests discussed above, automatically amounts to an insubstantial part.[178]

This provision is designed to prevent the circumvention of the sui generis right through a practice known as piecemeal copying. This occurs when a user systematically extracts small, insubstantial amounts of data over time, which, when aggregated, amount to a substantial part or otherwise harm the investment of the maker.[179]

The 'Economic Harm' Requirement: The CV-Online Shift

As explained above, traditionally, the infringement of the sui generis right was assessed through a quantitative or qualitative analysis of the extracted data. If a substantial part was utilised without authorization and no exceptions under Article 9 applied, infringement was established. However, the recent judgment in *CV-Online v Melons*[180] has introduced a significant teleological qualification to this test.

In this case, concerning a search engine specializing in job advertisements, the CJEU ruled that the extraction and re-utilisation of substantial parts of a database are prohibited only if they constitute a risk to the possibility of the maker redeeming their investment.[181]

Is it a new exception or a definition of infringement? This ruling might appear contradictory to the exhaustive list of exceptions in Article 9 or the dichotomy between substantial/ insubstantial parts in Articles 7 and 8. The Court, however, did not classify the defendant's actions as the use of an 'insubstantial part' (which would be permitted under Article 8). Instead, it focused on the rationale of Article 7 itself.

[178] ibid para 73.
[179] ibid para 86.
[180] Case C-762/19 *SIA "CV-Online Latvia" v SIA "Melons"* EU:C:2021:434 (*CV-Online Latvia*).
[181] ibid para 46.

The Court reasoned that the objective of the sui generis right is to protect the return on investment, not to create an absolute monopoly over information. This interpretative approach finds its specific roots in the *BHB* judgment, where the Court established that the prohibitions under Article 7(1) must be interpreted in the light of the objective pursued by the sui generis right, namely, to safeguard the results of the investment deployed by the maker of the database.[182] Building on this teleological framework, the Court in *CV-Online v Melons* held that the scope of protection must be determined by striking a fair balance between the legitimate interests of the database makers and those of users and competitors.[183] The Court recognized that certain acts by intermediaries, such as those of aggregators or search engines, may actually serve the broader objective of the Directive by stimulating innovation and contributing to the development of the information market.[184] This introduces a *de facto* 'economic harm' requirement into Article 7: acts that do not jeopardize the amortization of the investment fall outside the scope of the prohibition entirely.[185]

Exceptions and Rights of the Lawful User

In accordance with the principles outlined above, Article 8(1) of the Directive establishes a fundamental right for the lawful user to extract and re-utilise insubstantial parts of the database's contents. This provision effectively delineates a sphere of normal exploitation for the user. Similar to the mandatory nature of the 'normal use' provision in the copyright regime as regulated under Article 6(1), any contractual term preventing a lawful user from exercising this right shall also be null and void.[186]

[182] *British Horseracing Board* (n 126), para 45.
[183] *CV-Online Latvia* (n 180) para 41.
[184] ibid para 42.
[185] van Eechoud (173) 258.
[186] Database Directive art 15.

On the other hand, while Article 8 guarantees access to insubstantial parts, Article 9 permits Member States to stipulate specific exceptions regarding the extraction or re-utilisation of substantial parts (e.g., for private purposes, teaching, or public security). These optional exceptions largely parallel the copyright limitations set out in Article 6(2). Furthermore, the Directive imposes a safeguard clause, namely the 'three-step test'. Accordingly, any act performed by a lawful user must not unreasonably prejudice the rightholder's legitimate interests or conflict with the normal exploitation of the database.[187] Since the structural mechanism of these exceptions has already been analyzed under the Copyright section (Chapter 2.2.3), they will not be re-examined in detail here to avoid redundancy.

Limitation on Machine-Generated Data (The Data Act)

A significant restriction on the scope of protection has been introduced by the Data Act[188] to address the specific dynamics of the Internet of Things (IoT). Article 43 of the Regulation explicitly establishes that the sui generis right does not apply to databases containing data obtained or generated by means of physical components, such as sensors, of a connected product[189] or a related service[190] to the extent that such protection would hinder the user's right to access, use, or share that data as per the Data Act.[191]

[187] Database Directive art 8(2).
[188] Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) (Text with EEA relevance) [2023] OJ L 2023/2854 (*Data Act*).
[189] Data Act defines 'connected product' as an item that obtains, generates, or collects data concerning its use or environment and that is able to communicate product data via an electronic communications service, physical connection, or on-device access, and whose primary function is not the storing, processing, or transmission of data on behalf of any party other than the user. See Data Act, art 2(5).
[190] Data Act defines 'related service' as a digital service, other than an electronic communications service, including software, which is connected with the product at the time of the purchase, rent or lease in such a way that its absence would prevent the connected product from performing one or more of its functions, or which is subsequently connected to the product by the manufacturer or a third party to add to, update or adapt the functions of the connected product. See Data Act, art 2(6).
[191] A comprehensive analysis of the Data Act falls beyond the scope of this study. In summary, however, the Act aims to empower users of connected products and related services by granting them control over the data generated by their use, thereby facilitating data access and portability. See Data Act, arts. 4-5.

The primary objective of this provision is to prevent 'data lock-in' effects, ensuring that manufacturers cannot invoke the sui generis right to hinder the user's ability to access and share machine-generated data.[192] This legislative choice has profound implications for the future of the database right. Considering that IoT devices currently represent one of the most critical sources of data generation globally, excluding this vast category of data from the ambit of the Directive is telling.[193] By prioritizing data circulation and liquidity over proprietary control in such a dominant sector, Article 43 effectively signals a diminishing role for the sui generis right in the modern data economy, relegating it to a secondary status compared to the new access-oriented governance models.[194]

2.3.4. Beneficiaries and Term of Protection

The Directive adopts a strict criterion regarding the beneficiaries of protection. Under Article 11(1), the sui generis right is granted primarily to makers who are nationals of a Member State or who have their habitual residence in the territory of the Community. Regarding companies and firms, protection is extended only to those formed in accordance with the law of a Member State and having their registered office, central administration, or principal place of business within the Community.[195] Moreover, where a company or firm has only its registered office in

[192] Josef Drexl, 'Connected Devices – an Unfair Competition Law Approach to Data Access Rights of Users' in German Federal Ministry of Justice and Consumer Protection and Max Planck Institute for Innovation and Competition (eds), *Data Access, Consumer Interests and Public Welfare* (Nomos 2021) 477, 493-496; Drexl highlights that without legal guarantees of access, the decision to purchase a connected device leads to a lock-in of the user regarding other goods and services, raising concerns for both innovation and consumer policy. See also Pyry Nissinen, *Database Protection in Light of the European Data Act and Servitisation* (Master's thesis, University of Helsinki, October 2024) 11.

[193] Albena Dobreva, 'The Database Directive in the Landscape of Modern Databases' (2024) 22 Facta Universitatis, Series: L & Pol 235, 236-237.

[194] Drexl (n 192) 478-479; Valentina Moscon, 'Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU. A Wave of Propertisation of Information' (2023) Max Planck Institute for Innovation & Competition Research Paper No 23-14 <https://ssrn.com/abstract=4515815> accessed 12 January 2026.

[195] Database Directive, art 11(2).

the territory of the Community, its operations must be genuinely linked to the economy of a Member State on an ongoing basis.[196]

However, the definition becomes highly controversial regarding makers from third countries. Article 11(3), read in conjunction with Recital 56, stipulates that the right is available to non-EU nationals only if the Council concludes an agreement extending protection to them. This is known as the 'reciprocity clause', which was explicitly designed as a strategic bargaining chip.[197] By withholding protection from foreign entities, the Directive effectively pressured third countries to adopt similar protection mechanisms.[198] It is crucial to observe that this strategy was not strictly original; it closely mirrored the tactics employed by the United States a decade earlier in the Semiconductor Chip Protection Act of 1984, which similarly used reciprocity to force international harmonisation.[199]

In the specific context of the United States, this maneuver reignited debates regarding the recognition of such a right following the *Feist v. Rural* decision.[200] Despite its strategic intent, this arrangement also fueled arguments that the sui generis right was anti-competitive by granting European database developers an advantage over their American counterparts,[201] and led to allegations that the EU was supporting its own industry at the expense of customers and non-EU competitors.[202]

[196] ibid.
[197] Powell (n 113) 1248.
[198] Schneider (n 18) 561.
[199] Reichman and Samuelson (n 25) 96; McManis (n 51) 11.
[200] McManis (n 51) 11 and 45.
[201] Charles von Simson, 'Feist or Famine--American Database Copyright as an Economic Model for the European Union' (1995) 20 Brook J Int'l L 729, 766.
[202] McManis (n 51) 33; Even more problematic than these economic arguments is the concern that the reciprocity clause might violate international obligations, particularly the national treatment principle under the TRIPS. For a detailed discussion, see Davison (n 14) 221.

Term of Protection

The duration of the sui generis right is governed by Article 10 of the Directive, which establishes a standard term of fifteen years, which is calculated from the first of January of the year following the date of completion. However, if the database is made available to the public before this period expires, the term runs from the date the database is first made available to the public.

While a fifteen-year term might seem reasonable compared to copyright standards, the dynamic nature of databases introduces a critical nuance. Article 10(3) stipulates that any substantial change to the contents of a database, including those resulting from the accumulation of successive additions, deletions, or alterations, which would be considered a substantial new investment, qualifies the database for its own new term of protection. This provision creates a rolling term of protection. Unlike copyright, which eventually expires, a dynamic database can theoretically be protected indefinitely, provided the maker continues to invest in its maintenance.[203] This feature effectively allows EU database makers to lock up information indefinitely, raising significant concerns about the public domain.

2.4. Text and Data Mining (TDM) Exceptions and Databases

We are currently experiencing the era of 'Big Data', marked by an unprecedented surge of digital information.[204] The rise of the so-called 'Fourth Industrial Revolution' is fueled by this abundance, with quintillions of bytes of data created daily through mobile devices, social networks, and the IoT.[205] In this data-rich environment, human analysis alone is no longer

[203] Davison (n 14) 87.
[204] Geoffrey Xiao, 'Data Misappropriation: A Trade Secret Cause of Action for Data Scraping and a New Paradigm for Database Protection' (2022) 24 Colum Sci & Tech L Rev 125, 127.
[205] Christophe Geiger, Giancarlo Frosio and Oleksandr Bubulayenko, 'Text and Data Mining: Articles 3 and 4 of the Directive 2019/790/EU' in Concepción Saiz García and Raquel Evangelio Llorca (eds), *Propiedad intelectual y mercado único digital europeo* (Tirant lo Blanch 2019) 24; Anselm Kamperman Sanders, 'Data and Technology

enough to process information; instead, automated tools have become essential. This necessity has brought text and data mining (TDM) to the forefront of the digital economy. Defined generally as automated analytical techniques used to analyze text and data in digital form in order to generate information, including patterns, trends, and correlations,[206] TDM has become the cornerstone of innovation, particularly for the development of new technologies such as AI and machine learning systems.[207] However, the utility of TDM extends far beyond the realm of AI training; it serves as a vital research instrument across diverse sectors. For instance, in the healthcare industry, it enables pharmaceutical companies to uncover complex drug interactions or accelerate vaccine development by rapidly processing vast repositories of scientific literature, while in the business sector, it is indispensable for conducting sophisticated stock market analyses and financial forecasting.[208] TDM is, at its core, a research method for extracting information from large piles of data.

Prior to the adoption of the CDSM Directive[209], the legal status of TDM activities with respect to databases was uncertain. Under the traditional Database Directive regime, TDM processes, which typically involve the reproduction and extraction of vast amounts of data, were highly likely to constitute an infringement of the reproduction right (under copyright) and the extraction right (under the sui generis regime), unless specific authorization was obtained.[210]

Transfer: Competition Law in the Fourth Industrial Revolution' in Christopher Heath, Anselm Kamperman Sanders and Anke Moerland (eds), *Intellectual Property Law and the Fourth Industrial Revolution* (Kluwer Law International 2020) 199, 200.

[206] CDSM Directive (n 9), art 2(2).

[207] ibid recital 18; Alain Strowel and Rossana Ducato, 'Artificial Intelligence and Text and Data Mining: A Copyright Carol' in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021) 299, 300.

[208] Maryna Manteghi, 'Overcoming Barriers to Text and Data Mining in the Era of ChatGPT: The Proposed Data Act as a Game-Changer' (2024) 73 GRUR International 34; Séverine Dusollier, 'The 2019 Directive on Copyright in the Digital Single Market: Some Progress, a Few Bad Choices, and an Overall Failed Ambition' (2020) 57 Common Market Law Review 979, 984.

[209] See (n 9).

[210] ibid recital 8.

Recognizing that TDM activities fundamentally benefit the research community and support innovation,[211] the EU legislator sought to rebalance the intellectual property framework. In the critical context of the Big Data era, the public interest in unlocking the societal and economic potential of data analysis was deemed to take precedence over the absolute exclusivity of rights holders. The CDSM Directive addressed this legislative gap by introducing two exceptions for TDM, thereby reshaping the scope of database protection in the EU. Article 7(2) of the CDSM Directive stipulates that Article 5(a) of the Database Directive (concerning the rights of the author) and Article 7(1) of the Database Directive (concerning the sui generis right) shall not apply to acts of TDM carried out under the new exceptions.[212] It is important to note that while the exceptions introduced by the CDSM Directive apply broadly to all types of copyrighted works and subject matter, this study will focus exclusively on their application and impact from the specific perspective of database protection.

2.4.1. The Scientific Research Exception

Article 3 of the CDSM Directive establishes a mandatory exception specifically designed to facilitate scientific progress. It obliges Member States to provide an exception to the rights of reproduction (copyright) and extraction (sui generis database right) for reproductions and extractions made by research organizations and cultural heritage institutions in order to carry out text and data mining of databases to which they have lawful access, for the purposes of scientific research. The scope of this exception is restricted to 'research organizations', such as universities or research institutes, and 'cultural heritage institutions', such as libraries, museums, or archives. The Directive defines a research organization narrowly as an entity whose primary goal is to conduct scientific research or to provide educational services involving also the conduct of scientific research, either on a non-for-profit basis or pursuant to

[211] ibid.
[212] ibid arts 3-4.

a public interest mission.[213] Consequently, commercial entities are generally excluded from this specific exception unless they are acting in a public-private partnership where the commercial partner does not exercise decisive influence.[214] Despite its advantages, the exception is often subject to criticism due to its limited scope, as it omits independent researchers, investigative journalists, and innovative SMEs.[215]

The prerequisite for invoking this exception is 'lawful access'. The beneficiary must have legal access to the material being mined, such as through a subscription, an open license, or because the content is freely available online.

Crucially, Article 3 constitutes an imperative rule. According to Article 7(1) of the CDSM Directive, any contractual provision contrary to the exception provided in Article 3 is unenforceable. This means that a database provider cannot use 'Terms of Use' or licensing agreements to contractually prohibit a university from performing TDM on subscribed content. However, this freedom is not absolute. The CDSM Directive explicitly clarifies that rightholders are allowed to apply measures to ensure the security and integrity of the networks and databases where the works or other subject matter are hosted, provided that such measures do not go beyond what is necessary to achieve that objective.[216] This specific provision is particularly significant as it establishes the legal ground for technical restrictions, a critical intersection that will be further examined in the context of 'Technological Protection Measures' (TPM) in Section 2.5.

[213] ibid art 2(1).
[214] ibid recital 12.
[215] Thomas Margoni and Martin Kretschmer, 'A Deeper Look into the EU Text and Data Mining Exceptions: Harmonisation, Data Ownership, and the Future of Technology' (2022) 71 GRUR International 685, 695; Dusollier (n 208) 987.
[216] CDSM Directive (n 9) art 3(3).

2.4.2. The General Exception and the Opt-Out Mechanism

While Article 3 caters specifically to scientific research organizations, Article 4 of the CDSM Directive represents a pivotal legislative intervention designed to support the commercial data economy and private-sector innovation, including commercial entities, startups, and independent developers. The exception in Article 4 is not restricted to specific beneficiaries or non-commercial purposes. It applies to any user, including for-profit or commercial users, provided they have lawful access to the databases. This broader scope theoretically allows, for example, tech companies to mine publicly available data or subscribed content for purposes such as training machine learning algorithms or market analytics.

However, the critical distinction lies in the rightsholder's ability to control the use of their data. While Article 3 is mandatory and cannot be overridden by contract, the exception in Article 4 applies only on the condition that the use of the work has not been expressly reserved by the rightsholders.[217] This creates a 'right to opt-out' regime. In default, TDM is permitted; however, if a rightsholder wishes to prevent commercial mining, they must actively reserve their rights in an appropriate manner. The Directive distinguishes between offline and online content regarding how this reservation must be communicated. For content made publicly available online, the reservation of rights is only effective if it is machine-readable.[218] This can be achieved through metadata or technical means, such as the use of standard protocols like 'robots.txt' files or newer semantic standards.[219]

However, considering the CDSM Directive's overarching objective to promote innovation and research, a remuneration-based model (statutory licensing) would have been a more appropriate approach than a binary opt-out mechanism, as it would have prevented the total blocking of

[217] ibid art 4(3).
[218] ibid recital 18.
[219] Dusollier (n 208) 987.

commercial activities.[220] In the current regime, rightsholders can exclude themselves from the scope of this exception with a relatively minor proactive step. Given the lack of economic incentives for rightsholders to voluntarily permit free commercial exploitation, there is a significant risk that this exception may become practically obsolete or irrelevant over time.

Moreover, rather than empowering users, the mechanism inadvertently creates new licensing opportunities for rightsholders. It enables price discrimination strategies, where data holders can offer tiered subscription packages, charging a premium for access that includes TDM rights while excluding them from standard packages. Consequently, the regulation effectively provides rightsholders with a tool for product differentiation and revenue generation, rather than securing a reliable access channel for innovators. Indeed, due to this significant structural limitation, it has been asserted that EU-based companies relying on TDM will face a competitive disadvantage compared to their counterparts in jurisdictions with more flexible regimes, such as Japan or the United States.[221]

2.4.3. Applicability to Artificial Intelligence Training Activities

The rapid rise of AI and machine learning has placed the concept of TDM at the center of a global legal debate. Since AI models require vast amounts of data for training purposes, the question arises whether the use of a protected database to train an AI constitutes an infringement of intellectual property rights, or does it fall into the scope of the TDM under the CDSM Directive?

[220] Christophe Geiger, 'The Missing Goal-Scorers in the Artificial Intelligence Team: Of Big Data, the Right to Research and the Failed Text-and-Data Mining Limitations in the CSDM Directive' in Natalie Helberger and others (eds), *Intellectual Property and Sports: Essays in Honour of P Bernt Hugenholtz* (Information Law Series vol 46, Wolters Kluwer 2021) 383, 391-392.
[221] Geiger, Frosio and Bubulayenko (n 205) 56-57; Geiger (n 218) 392-393.

The prevailing view advocates for the inclusion of AI training within the scope of TDM based on the breadth of the legal definition. Article 2(2) of the CDSM Directive defines TDM as *"any automated analytical technique aimed at analysing text and data in digital form in order to generate information which includes but is not limited to patterns, trends and correlations"*. Proponents argue that machine learning, the core of AI training, functions precisely by analyzing vast datasets to infer statistical patterns and correlations. Therefore, from a technical perspective, AI training is a form of TDM.[222] However, a counter-narrative highlights the limitations of this classification. Critics emphasize that TDM exceptions serve as a safe harbor only for the rights of reproduction and extraction. They do not extend to downstream acts such as the communication to the public or the distribution of the trained model.[223]

This distinction is particularly critical for Generative AI. Unlike traditional TDM, which produces abstract trends, generative models may lead to the memorization or reconstruction of the original works in their outputs.[224] Such scenarios create a direct competition with the original works in the market, a risk of substitution that the TDM exception was not originally designed to address.[225]

Despite these concerns, for the purposes of the input phase (the initial ingestion of data), the functional definition of TDM under EU law is generally accepted to cover AI training.[226]

---

[222] Margoni and Kretschmer (n 215) 687; Dusollier (n 208) 984.
[223] Eleonora Rosati, 'Is Text and Data Mining Synonymous with AI Training?' (2024) 19 Journal of Intellectual Property Law & Practice 851; see also European Copyright Society, 'Copyright and Generative AI: Opinion of the European Copyright Society' (ECS Opinion, January 2025) 6 <https://europeancopyrightsociety.org/wp-content/uploads/2025/02/ecs_opinion_genai_january2025.pdf> accessed 12 January 2026.
[224] For further information, see Tim W Dornis, 'The Training of Generative AI Is Not Text and Data Mining' (2025) 47 EIPR 65.
[225] Nicola Lucchi, 'Generative AI and Copyright - Training, Creation, Regulation' (Study PE 774.095, European Parliament 2025) 33 and 41-42 available at <https://www.europarl.europa.eu/thinktank/en/document/IUST_STU(2025)774095> accessed 12 January 2026; Dornis (224) 74-75.
[226] Dornis (224) 65.

Consequently, the legality of using protected databases for AI development currently hinges on the applicability of TDM exceptions.

Chapter 3 – Database Protection under Turkish Law

3.1. Legislative Background of the Fikir ve Sanat Eserleri Kanunu (FSEK)

The fundamental legal instrument governing copyright and related rights in the Republic of Türkiye is the Law on Intellectual and Artistic Works nr. 5846 (the FSEK).[227] Enacted on December 10, 1951, and entering into force on January 1, 1952, this law marked a pivotal shift in the Turkish legal landscape.

Prior to the FSEK, copyright law in the early Republican era was governed by the 1910 Rights of Authorship Law (*Hakk-ı Telif Kanunu*), a legislative remnant of the Ottoman Empire.[228] However, this outdated statute failed to meet the necessities of the modern era and contained provisions that were incompatible with international standards, particularly the Berne Convention.[229] The drive for reform was twofold: the practical problems arising from the inadequacies of the 1910 Law and the young Republic's strategic goal to integrate with the international legal community. Consequently, the preparation of a modern copyright law was synchronized with Türkiye's accession to the Berne Convention, which also became effective on January 1, 1952.[230]

---

[227] FSEK (n 8).

[228] Kadir Kurt, 'Bern Sözleşmesi ve Türkiye'nin Katılım Süreci' ['The Berne Convention and Türkiye's Accession Process'] (2021) 37(104) Atatürk Araştırma Merkezi Dergisi 1, 8-9 <https://doi.org/10.33419/aamd.1015901> accessed 12 January 2025.

[229] İlhan Öztrak, 'Fikir ve Sanat Eserleri Üzerindeki Hakların Korunması Yönünden Pozitif Hukuktaki Tarihi Gelişme' ['The Historical Development of Positive Law Regarding the Protection of Rights in Intellectual and Artistic Works'] (1970) 25(3) Ankara Üniversitesi SBF Dergisi, 5 <https://doi.org/10.1501/SBFder_0000001239> accessed 12 January 2025.

[230] Law Authorising the Government to Accede to the Berne Union for the Protection of Literary and Artistic Works (Edebiyat ve Sanat Eserlerini Koruma İçin Kurulan Berne Birliğine Katılma Hususunda Hükümete Yetki Verilmesine Dair Kanun), Official Gazette 2 June 1951 No 7824 (Türkiye).

The preparatory work for the FSEK was conducted by a specialized commission established to modernize the intellectual property regime. While this commission included several prominent figures of the era, the final text adopted by the Turkish Parliament was predominantly based on the draft prepared by Ernst E. Hirsch.[231]

In its original form, the FSEK contained no specific provisions regarding databases. Consequently, databases remained devoid of explicit IPR protection in national legislation for a significant period.[232]

The legislative recognition of databases emerged much later, driven primarily by external harmonization requirements. The first step was taken in 1995,[233] motivated by two critical factors: the Customs Union with the EU and international treaty obligations. The Customs Union Agreement imposed clear obligations for copyright harmonization, including alignment with the then-effective Computer Programs Directive (91/250/EEC).[234] Moreover, the Agreement explicitly included a general provision necessitating the introduction of database protection. Notably, since the EU Database Directive had not yet been formally adopted at that time, the Agreement referred to the Commission's First Proposal for the Directive rather than the final text. As for the obligations borne from international agreements, the amendments were catalyzed by the ratification of the TRIPS during the same period. Furthermore, the legislative

[231] Kurt (n 228) 33; Hirsch, a distinguished German legal scholar who had taken refuge in Türkiye, played a foundational role in the reception of Swiss and German legal concepts into the Turkish system. For a detailed account of Hirsch's impact, see Fuat Andic and Arnold Reisman, 'Migration and Transfer of Knowledge: Refugees from Nazism and Turkish Legal Reform' (2007) *forum historiae iuris* 20 <https://forhistiur.net/2007-07-reisman-andic> accessed 12 January 2026. The commission also included other eminent legal scholars of the period, such as Ali Fuat Başgil, Andreas B. Schwarz, C. Crozat, Ebül'ula Mardin, Yavuz Abadan, and Halil Aslanlı. See Kurt (n 228) 31.

[232] Although it might be argued that the Berne Convention – which Turkey acceded to in 1952 – offered some level of coverage, as previously noted, the Convention applies merely to 'collections of literary or artistic works' (Article 2(5)). In this context, it afforded only very limited and fragmented protection to databases, particularly failing to cover factual compilations prevalent in the modern economy.

[233] Law No 4110 Amending Certain Articles of the Law on Intellectual and Artistic Works (5846 Sayılı Fikir ve Sanat Eserleri Kanununun Bazı Maddelerinin Değiştirilmesine İlişkin Kanun), Official Gazette 12 June 1995 No 22311 (Türkiye).

[234] Decision No 1/95 of the EC–Turkey Association Council of 22 December 1995 on implementing the final phase of the Customs Union [1996] OJ L35/1, Annex 8, art 7.

justification for the amendments contained specific references to the Rome Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organisations.[235]

With the 1995 amendments, it was formally established that databases would benefit from copyright protection under the category of 'compilations'.[236] However, the resulting regulation did not go beyond a poor translation of Article 2(5) of the Berne Convention. Consequently, these amendments failed to achieve the desired legislative quality. Critics argued that the hasty translation of international texts transformed the FSEK into a structure that was difficult to implement and disrupted the systematic coherence of the law.[237] Moreover, while the 1995 amendments paved the way for copyright protection of databases, they did not introduce the sui generis right. Indeed, the EU-Turkey Progress Reports for the years 2002 and 2003 explicitly drew attention to the fact that specific provisions regarding sui generis database protection were still absent in the Turkish legal framework.[238] Driven by these motives, the sui generis protection was finally incorporated into the FSEK through the amendments that entered into force in 2004.[239]

In conclusion, today, similar to the EU legal framework, the FSEK provides both copyright protection and sui generis protection for databases; however, there are significant structural distinctions in how these are regulated.

---

[235] Bill on Amending Certain Articles of the Law on Intellectual and Artistic Works and Reports of the Justice and National Education Commissions (Fikir ve Sanat Eserleri Kanununun Bazı Maddelerinin Değiştirilmesine İlişkin Kanun Tasarısı ve Adalet ve Millî Eğitim Komisyonları Raporları) (TBMM 19th Term 4th Legislative Year, Bill 1/722, Sıra Sayısı 771).

[236] FSEK (n 8), art 6(11).

[237] For detailed criticisms regarding this issue, see Gürsel Üstün, 'Türkiye'de Fikir ve Sanat Eserleri Yasası'ndaki Son Gelişmeler' ['Recent Developments in Turkey's Law on Intellectual and Artistic Works'] (1996) 4(1–2) Marmara Üniversitesi Avrupa Araştırmaları Dergisi 101 <https://doi.org/10.29228/mjes.337> accessed 12 January 2026; Mustafa Ateş, 'Veri Tabanlarının Hukukî Koruması' ['Legal Protection of Databases'] (2006) 55(1) Ankara Üniversitesi Hukuk Fakültesi Dergisi 47, 64-65.

[238] Commission, '2002 Regular Report on Turkey's Progress towards Accession' SEC(2002) 1412, 75; Commission, '2003 Regular Report on Turkey's Progress towards Accession' SEC(2003) 1212 final.

[239] Law No 5101 Amending Various Laws (Çeşitli Kanunlarda Değişiklik Yapılmasına İlişkin Kanun), Official Gazette 12 March 2004 No 25400 (Türkiye).

3.2. Copyright Protection of Databases under Turkish Law

3.2.1. Definition of Database

The FSEK does not contain a direct, autonomous definition of a 'database'. Instead, it defines databases indirectly by classifying them as 'compilations', provided they meet certain criteria. According to the Law, databases are protected as compilations if they constitute databases that are "*readable by a device or in other forms, resulting from the selection and compilation of data and materials according to a specific purpose and a special plan*".[240]

The Law explicitly requires data to be selected and arranged 'according to a specific purpose and a special plan'. Considering the *ratio legis* of the provision, namely, the intent to harmonize with the EU framework, this phrase must be interpreted as corresponding to the Directive's requirement of being arranged in a 'systematic or methodical way'.[241] Similarly, the phrase 'readable by a device or in other forms' is intended to encompass electronic databases, mirroring the Database Directive's 'by electronic or other means'.[242]

However, expressing these concepts through such convoluted terminology, which remains ambiguous even in the original Turkish, is far from ideal. Moreover, unlike the Database Directive, the FSEK fails to incorporate crucial definitional elements such as 'independent works' and 'individually accessible' materials. These specific criteria, which are central to the

[240] FSEK (n 8), art 6(11).
[241] Kadir Baş, 'Dijital Platformlar ve Veri Tabanı Koruması' ['Digital Platforms and Database Protection'] (2025) 31(1) Marmara Üniversitesi Hukuk Fakültesi Hukuk Araştırmaları Dergisi 449, 453-454; Yavuz Selim Şener, Fikri Mülkiyet Hukukunda Dijital Veri Tabanlarının Korunması [Protection of Digital Databases in Intellectual Property Law] (PhD thesis, Istanbul Kültür University 2013) 88 (asserting that the expression 'specific purpose' serves as the equivalent to the 'systematic or methodical way' criterion established in the Database Directive).
[242] İbrahim Hulusi Külahcı, *Elektronik Veri Tabanlarının Fikir ve Sanat Hukuku Kapsamında Korunması* [Protection of Electronic Databases under Intellectual and Artistic Works Law] (Master's thesis, Istanbul Sabahattin Zaim University 2019) 9; Cahit Suluk, Rauf Karasu and Temel Nal, *Fikri Mülkiyet Hukuku* [Intellectual Property Law] (Seçkin Yayıncılık 2019) 156 (arguing that this should be interpreted as being 'individually accessible, by electronic or other means').

Directive's definition, have no counterpart in Turkish law, leaving the exact scope of the subject matter legally vague.

Finally, a significant systematic flaw exists regarding the placement and application of this definition. As currently drafted, this indirect definition is located within the section regulating compilations, specifically framed within the context of copyright protection. However, as will be examined in detail in the section on sui generis protection (Section 3.3), the structural elements contained in this definition, namely, the requirements of being prepared according to a 'specific purpose and special plan' (being arranged in a systematic or methodical way) and being 'readable by a device' (individually accesible by electronic or other means), must also be taken into account when establishing the existence of a database for sui generis purposes. Consequently, to resolve these ambiguities, a general and explicit definition of a 'database' should be introduced under Article 1/B (Definitions) of the FSEK, independent of the compilation category.

3.2.2. Conditions for Copyright Protection

Under Turkish copyright law, a 'work' is defined as "*any kind of intellectual and artistic product that bears the peculiarity of its author and is listed in the Law as a work of science and literature, music, fine arts, or cinema*".[243] A compilation, on the other hand, is fundamentally defined as a work resulting from 'intellectual creativity' that consists of selections and arrangements – such as an encyclopedia or anthology – provided the rights to the original works contained within are reserved.[244] The classification of databases under the category of 'compilations' within the existing systematic framework of the FSEK is therefore problematic in several respects. This is primarily because a strict literal interpretation of this provision

[243] FSEK (n 8), art 1/B(a).
[244] ibid art 1/B(d).

presumes that a database must contain other copyrightable ‘works’ to be eligible for protection. However, this presumption stands in sharp contradiction to the specific wording found in Article 6(11), which, as explained above, explicitly refers to the selection and compilation of ‘data and materials’ rather than a ‘collection of works’. This creates a paradox: while the umbrella category requires ‘works’, the specific provision acknowledges ‘data’.

In reality, databases are frequently composed of factual content or raw data that do not qualify as ‘works’ in the legal sense. By listing databases strictly under the category of ‘compilations’, the FSEK creates a systematic inconsistency and ignores the prevalence of factual databases, making this classification logically incompatible with the practical reality of database creation.[245]

Indeed, due to this restrictive framework, it has even been argued in Turkish legal literature that factual databases, those whose contents do not consist of protected ‘works’, should not benefit from copyright protection altogether.[246] However, such an interpretation would be fundamentally incompatible with international agreements, notably TRIPS and the WCT, as well as the modern requirements of the digital economy and the overarching legislative purpose of the FSEK. In practice, the jurisprudence of the Court of Cassation (*Yargıtay*) provides a vital corrective to these statutory shortcomings. The Court has explicitly ruled that the protection afforded to databases as compilations is not limited to those containing existing ‘works’, but also extends to those composed of factual data and materials that are ‘open for everyone's use’.

[245] Ünal Tekinalp, ‘Derleme Eser, Düşünce Yaratıcılığı ve Bunun “Hususiyet” Üzerindeki Etkisi’ [‘Compilations, Criterion of Intellectual Creativity and Its Effects on the Criterion of "Peculiarity of Works"’] (2005) (1) Ankara Barosu Fikri Mülkiyet ve Rekabet Hukuku Dergisi 69, 72-73.
[246] Ateş (n 237) 59.

According to the Court, the essential requirement for protection is that the selection and arrangement of such materials bear the author's peculiarity.[247]

The Originality Threshold

The primary and most essential condition for copyright protection under Turkish law is that the work must bear the 'pecularity of its author'. While this concept constitutes the keystone of the copyright regime, the FSEK does not provide an explicit statutory definition of it.

In legal doctrine, the author's peculiarity is generally explained as the element that enables a work to be attributed to its author, rendering it independent and distinctive from other works. It is frequently characterized as a creative activity that distinguishes a work from ordinary or commonplace productions – an originality that cannot be produced by just anyone, or simply as the reflection of the author's creative power onto the work.[248] The Court of Cassation has adopted a subjective standard regarding this concept. In a landmark decision, the Court defined the term broadly as: "*the characteristics that the author adds to the work from their own world of ideas, thoughts, emotions, and feelings, and from their abilities based on an intellectual foundation*".[249]

Although it is generally accepted that 'author's pecularity' does not require 'novelty' but rather a 'style of expression specific to the individual', judicial practice in Türkiye reveals a dynamic approach where different criteria are applied depending on the type of work.[250] For instance, in

[247] Yargıtay [Court of Cassation], 11th Civil Chamber, 13 April 2006, 2005/3506 E., 2006/4425 K., as cited in Külahcı (n 241) 22-23. The Court of Cassation is the supreme court of last resort in the Turkish civil and criminal justice system, ensuring the uniform application of the law across the country.
[248] Hayri Bozgeyik, 'Fikir ve Sanat Eserlerinde Hususiyet' ['Originality in Intellectual and Artistic Works'] (2009) 25(3) BATIDER 169, 171-172; Savaş Bozbel, *Fikri Mülkiyet Hukuku* [Intellectual Property Law] (Oniki Levha Yayıncılık, 2015) 30.
[249] Yargıtay [Court of Cassation], Assembly of Civil Chambers, 14 October 2021, 2017/2758 E., 2021/1228 K.
[250] Osman Gazi Güçlütürk, 'ChatGPT ile Üretilen İçeriklerin Eser Niteliğinin 5846 Sayılı Fikir ve Sanat Eserleri Kanunu Bakımından Değerlendirilmesi' ['Assessment of the Work Status of Content Generated by ChatGPT under Law No 5846 on Intellectual and Artistic Works'] (2022) (2) Galatasaray Üniversitesi Hukuk Fakültesi Dergisi 1899, 1908; Bozbel (n 248) 32.

the context of literary and scientific works, courts have been observed to deny protection to subject matters deemed to have 'low-level expression' or even 'insufficient informational content'.[251] Drawing from this, it can be stated that author's pecularity is not merely evaluated as unique expression or style; it also requires the author to move beyond technical necessities and operate within a specific area of free creative choice.[252]

As noted previously, while the general definition requires 'peculiarity', Article 1/B(d) introduces a divergent phrasing in terms of compilations, requiring the work to be the result of 'intellectual creativity'. This terminological divergence appears to be a result of legislative carelessness in the choice of wording rather than a deliberate shift in the legal standard. Therefore, to ensure systematic consistency, this phrase should simply be interpreted as the standard requirement of originality applied to all other categories of works.[253] Indeed, in a 2012 decision, the Court of Cassation confirmed this view, stating that for compilation works, the equivalent of pecularity is 'intellectual creativity'.[254]

However, a more recent decision by the Court in 2021 regarding databases presents a highly controversial analysis. The case concerned the unauthorized copying and distribution of a database created by a media monitoring company, which tracked printed and audiovisual publications daily, archiving them under specific categories of interest and individuals.[255] In this decision, the Court adopted a radical stance that seemingly contradicts its established jurisprudence. The Court effectively embraced a 'sweat of the brow' approach within the copyright context, suggesting that the condition of author's pecularity should not be strictly

[251] Güçlütürk (n 250) 1909.
[252] Suluk (n 242) 44-45.
[253] Tekinalp (n 245) 74-76; Ateş (n 237) 60; Baş (n 241) 460; Nükhet Evrim Sevi, *Fikri Mülkiyet Hukuku ve Haksız Rekabet Açısından Veri Tabanlarının Korunması* [Protection of Databases under Intellectual Property Law and Unfair Competition] (Master's thesis, Dokuz Eylül University 2005) 45.
[254] Yargıtay [Court of Cassation], 11th Civil Chamber, 14 February 2012, 2010/9679 E., 2012/1890 K.
[255] Yargıtay [Court of Cassation], 11th Civil Chamber, 13 April 2022, 2020/5940 E., 2022/2992 K.

sought in databases, as the aim is to protect labor and investment. Paradoxically, while dismissing the need for creativity, the Court then proceeded to define 'intellectual creativity' as requiring the database to possess "*a certain degree of originality compared to previous databases*" and to be "*arranged in a logical sequence, such as alphabetical or chronological order*" to facilitate easy access.[256]

This reasoning is legally flawed on multiple levels. First, searching for originality compared to previous databases conflates copyright with patent law's novelty requirement, which is foreign to copyright theory. Second, the Court rejected copyright protection in this case on the grounds that the database service was 'already known' and the materials were not arranged alphabetically or chronologically. This is a significant methodological error because technical constraints or logic (such as alphabetical order) are precisely the elements that suppose to exclude originality in copyright law. By demanding a logical order for protection, the Court turned the standard of creative arrangement on its head. Although the Court ultimately ruled that the database benefited from sui generis protection due to the investment involved, its reasoning regarding the copyright threshold created significant legal uncertainty.

The Selection and Arrangement Problem

Furthermore, regardless of how the standard is defined, the law necessitates that this peculiarity or intellectual creativity must be found in the selection 'and' arrangement of the data.[257]

A critical statutory issue arises here: unlike the Database Directive, which uses the disjunctive 'or' (selection or arrangement), Article 6(11) of the FSEK creates a cumulative requirement. The specific wording of the Law suggests that the author's pecularity must be present in both

[256] ibid.
[257] FSEK (n 8), art 6(11).

the selection and the arrangement. Consequently, a database that displays creativity in selection but utilizes a standard arrangement could theoretically be denied copyright protection.[258]

While some scholars argue that this formulation is acceptable, suggesting that arrangement is a natural act following selection and thus the cumulative 'and' is practically appropriate,[259] this interpretation conflicts with the *ratio legis* of the Law, which is harmonization with the EU acquis. Although the provision should ideally be interpreted as 'or' to align with the Database Directive,[260] a legislative amendment is necessary to correct this restrictive syntax and ensure that creativity in either element suffices for protection.

3.2.3. Ownership and Authorship

While the Database Directive provides Member States with the flexibility to designate legal persons (i.e., companies) as authors,[261] Turkish copyright law adheres strictly to the principle of the natural person authorship.

According to Article 8 of the FSEK, the author of a work is defined simply as the person who creates it. Similarly, in the definitions section (Article 1/B), the author is described as the person who creates the work. Consequently, the author of an original database is the individual who creates it by imparting their own peculiarity to its selection and arrangement.

[258] Ateş (n 237) 68-69; Emine Göğüş, 'Veri Tabanlarına Sağlanan Hukuki Koruma' ['Legal Protection Granted to Databases'] (2024) (1) *İbn Haldun Üniversitesi Hukuk Fakültesi Dergisi* 91, 107; Külahcı (n 242) 35.
[259] Uğur Çolak, 'Topluluk ve Türk Hukukunda Veri Tabanlarına Sağlanan *Sui Generis* Koruma ve Spin-Off Teori' ['Sui Generis Protection of Databases in Community and Turkish Law, and the Spin-Off Theory'] 2005) (1) *Ankara Barosu Fikri Mülkiyet ve Rekabet Hukuku Dergisi* 19, 34.
[260] Baş (n 241) 460.
[261] Database Directive, art 4(1).

The Principle of Natural Person Authorship

A closer textual analysis of the FSEK reveals that the relevant provisions do not explicitly specify whether the term 'person' refers to a natural or a legal person. The Law merely uses the generic term 'the person who creates'. However, despite this textual ambiguity, it is firmly established in both legal doctrine and judicial practice that authorship is exclusive to natural persons. That said, the concept of legal person authorship is not entirely alien to the Turkish copyright system. Indeed, prior to the amendments made in 1995, the FSEK explicitly recognized the authorship of legal entities.[262] In the current legal landscape, although the statutory wording does not theoretically preclude legal entity authorship – since it does not explicitly say 'natural person' – the prevailing view in doctrine and jurisprudence is restrictive. This interpretation is grounded in the 'author's pecularity' condition discussed in the previous section. Since this term is defined as the reflection of the author's intellectual and emotional world, it is argued that a legal person, lacking a biological and psychological existence, cannot inherently possess or reflect such characteristics.[263]

Consequently, under Turkish law, a legal entity can never be deemed the author of a database, even if the database was created entirely through their investment, initiative, and under their direction.

[262] For detailed information regarding the amendments made in this regard and the current status of the Law, see Cemil Şaar, 'Eser Sahipliğinde Gerçek Kişi Olma Şartının Yerindeliği Üzerine Bir İnceleme: Tüzel Kişiler Eser Sahibi Olabilir Mi?' ['On the Requirement of Natural Personhood in Copyright Ownership: Can Legal Persons Be Authors?'] (2025) 10(2) *İstanbul Aydın Üniversitesi Hukuk Fakültesi Dergisi* 191.
[263] Güçlütürk (n 250) 1910.

Databases Created by Employees

Since the vast majority of modern databases are created by employees within a corporate structure, the legal relationship between the employee (the actual creator) and the employer (the investor) becomes the focal point of the protection regime.[264]

This relationship is governed by Article 18 of the FSEK. The article stipulates that, unless otherwise agreed in a contract or understood from the nature of the work, the authority to exercise the economic rights over works created by employees during the execution of their duties belongs to the employer. However, in this context, it is crucial to distinguish between the ownership of rights and the authority to exercise rights. not confer the status of 'author' upon the employer. Instead, the FSEK establishes a specific legal construction where the rights are inherently originated in the person of the employee, but the authority to exercise the economic rights is transferred *ex lege* to the employer.[265]

This distinction poses potential practical challenges for the management of databases. While the economic rights (reproduction, distribution, etc.) are exercised by the employer, the moral rights[266] remain with the employee.[267] This is because, under Turkish law, moral rights are generally considered strictly personal rights and are therefore non-transferable.[268] Nevertheless, despite this strict adherence to the non-transferability of moral rights, legal doctrine offers pragmatic interpretations to prevent commercial deadlock. There are prevailing views suggesting that the authority to exercise certain moral rights – particularly those necessary for

[264] Koscik and Myska (n 89) 49.
[265] Şener (n 241) 95; Külahcı (n 242) 45.
[266] Turkish copyright law explicitly recognizes and protects moral rights, thereby aligning closer to the Continental European *droit d'auteur* system rather than the Anglo-Saxon copyright tradition. However, it occupies a unique position between the two; unlike the classical *droit d'auteur* system, the FSEK takes the 'economic and moral rights arising from the work' as its primary point of departure rather than the 'work' or the 'author', see Suluk (n 242) 44.
[267] Sevi (n 253) 55.
[268] Şener (n 241) 95.

the commercial exploitation of the work – can be implicitly transferred to or exercised by the employer.[269]

Collaborative Authorship

Databases are rarely the product of a single individual. In cases where multiple people contribute to the creation of a work, the FSEK applies different rules depending on whether the resulting work is separable or inseparable.

If the database is created by the participation of multiple persons and the contribution of each cannot be separated from the whole, the work is considered a joint work. In this scenario, the union of persons deemed the author, and rights on the work must be exercised jointly.[270] In this respect, the Turkish regulation aligns with the approach established in Article 4(3) of the Database Directive. However, the FSEK imposes a threshold for this participation. Mere technical services or assistance regarding details or accessories provided during the creation of the work do not constitute a basis for participation in authorship.[271] Crucially for the database industry, the FSEK provides a specific rule for joint works created within an organization. If the joint authors have come together under a specific organization, for instance, if they have created the database by acting together upon the instruction or order of an employer, the authority to exercise the rights on the joint work belongs to the natural or legal person who assembled the authors, unless otherwise provided in the contract or service conditions.[272]

[269] ibid; Suluk (n 242) 82-83.
[270] FSEK (n 8), art 10(1).
[271] ibid art 10(3).
[272] ibid art 10(4).

On the other hand, if the work is created by multiple persons but their contributions are separable (e.g., distinct modules or independent datasets), the work is classified as a collective work. In this case, each author retains ownership of their own specific contribution.[273]

3.2.4. Scope of Protection and Exceptions

Once a database qualifies for protection as a compilation, the author acquires a bundle of exclusive economic and moral rights from the very moment of its creation (*ipso iure*), without the need for any registration or formality.[274] It is important to note that, under Turkish law, these exclusive rights are subject to the principle of *numerus clausus*, meaning they are limited strictly to those explicitly enumerated in the Law.[275]

Exclusive Economic Rights

According to Articles 21 through 25 of the FSEK, the author of a database enjoys the following exclusive economic rights:

i. **Adaptation:** The right to adapt, edit, or modify the database structure. This includes creating derivative works based on the original structure.
ii. **Reproduction:** The right to reproduce the original or copies of the database in any form or method. This includes the temporary or permanent loading of the database into the memory of a computer system.
iii. **Distribution:** The right to rent, lend, put up for sale, or distribute in other ways the original or reproduced copies of the work.

[273] ibid art 9.
[274] Külahcı (n 242) 47-48.
[275] FSEK (n 8), art 20(1); Bozbel (n 248) 100.

iv. **Communication to the Public:** The right to make the database available to the public via wire or wireless means (i.e., online access), ensuring that members of the public may access it from a place and at a time individually chosen by them.

v. **Performance/ Representation:** The right to perform or represent the work publicly, such as reading, playing, or displaying it in places accessible to the public either directly or through technical means. While this economic right typically associated with musical or dramatic works, for databases, this covers the public display or demonstration of the database content.

Consistent with the EU Database Directive and international principles, these rights apply strictly to the selection and arrangement of the contents. They do not extend to the data itself or the factual information contained within the database.[276]

This distinction is reflected in Turkish judicial practice, albeit implicitly. In a dispute brought before the Court of Cassation, the central issue was whether a catalog prepared by the defendant for food retailers and suppliers was created by misappropriating another catalog previously prepared by the plaintiff.[277] The Court based its evaluation on Article 6(11) of the FSEK, thereby analyzing the dispute under the copyright regime. Although not explicitly stated in the text of the decision, the Court proceeded on the assumption that the catalogs in question met the eligibility criteria for copyright protection. The Court acknowledged an overlap in the content of the two catalogs; however, it ruled that no infringement (unfair plagiarism) existed. The Court reasoned that the similarity in data was *"compulsory due to the technical nature of the information used"*. Furthermore, it emphasized that *"differences predominated in the holistic assessment of the presentation"* and that the similarity between the databases was proportionally weak. While the decision did not explicitly state that copyright protection does

[276] FSEK (n 8), art 6(11).
[277] Yargıtay [Court of Cassation], 11th Civil Chamber, 12 June 2017, 2017/2028 E., 2017/3587 K.

not extend to the data itself, the Court's methodology, exonerating the defendant based on differences in the presentation (arrangement) despite the overlap in content (data), aligns with the fundamental principle that copyright protects the structure, not the facts.[278]

It is imperative to note that Turkish copyright law has adopted the principle of national exhaustion.[279] Furthermore, it is generally accepted in doctrine that this principle applies only to physical copies. Consequently, the reintroduction of an online database into commercial circulation falls under the 'communication to the public' right rather than the distribution right, meaning the right of distribution is not exhausted for online transmissions.[280] Therefore, the provisions regarding exhaustion in the FSEK are generally consistent with the Database Directive and only apply to physical copies of a database.

Moral Rights

The FSEK grants authors a set of moral rights which are, as a rule, strictly personal, non-transferable, and non-waivable.[281] These rights protect the spiritual and personal link between the author and the work against unjust attacks by third parties.[282] In the specific context of databases, these rights can be grouped into three primary categories:

[278] İlhami Güneş, 'Uygulamada Hususiyet İçeren Veri Tabanlarının Koruması ve Sui Generis Koruma' ['Protection of Databases Exhibiting Originality in Practice and Sui Generis Protection'] (2018) 13(142) Terazi Hukuk Dergisi 99, 101; However, since the decision did not explicitly articulate these distinctions and failed to conduct a separate evaluation regarding the sui generis right, it creates potential ambiguity for future cases. If this reasoning – excusing the copying of data based on changes in presentation – were to be applied as a criterion for sui generis infringement, it would suggest that the Court of Cassation diverges from the principles established by the CJEU, notably in *Directmedia*. As discussed in Chapter 2.3.3, the CJEU clarified that the extraction of data constitutes an infringement of the sui generis right even if the extracted data is subsequently rearranged or integrated into a different structure. For an evaluation of this issue in Turkish law, see Nağme Gürpınar, 'Veri Tabanlarının Fikrî Hak Olarak Korunması Hakkında Karar İncelemeleri' ['Case Analyses on the Protection of Databases as Intellectual Property Rights'] (2025) 99(2) İstanbul Barosu Dergisi 47, 60-61.
[279] FSEK (n 8), art 23(2).
[280] Sevi (n 253) 64; Bozbel (n 248) 81; Külahcı (n 242) 68; Suluk (n 242) 94.
[281] Bozbel (n 248) 100; While moral rights are non-transferable, the exercise of these rights (TR: *kullanma yetkisi*) can be contractually transferred to third parties (e.g., employers), see Suluk (n 242) 85.
[282] Külahcı (n 242) 49.

i. **Authority to Disclose to the Public:** The authority to decide whether, when, and how the work will be disclosed to the public.[283]

ii. **Right to Claim Authorship:** The authority to decide whether to publish the work under the author's own name, a pseudonym, or anonymously.[284]

iii. **Right to Integrity:** This right grants the author the right to prevent any additions, deletions, or modifications to the work that would damage its integrity or the author's reputation.[285] The aim here is to enable the author to preserve the unique characteristics they have conveyed in the work, in other words, to maintain the relationship of ownership between the work and the author.[286]

Exceptions and Limitations

The exclusive economic rights of the author are not absolute. They are subject to various limitations and exceptions defined under the FSEK, which are rooted in public interest considerations such as public order, judicial proceedings, and educational purposes. It is observed that copyright exceptions in Turkish law are generally regulated in a broad manner.[287]

Since the Law does not provide specific exceptions for databases, the general copyright exceptions apply *mutatis mutandis*. In this context, the exceptions relevant to databases can be grouped under two main headings: limitations based on public interest and limitations based on private interest.

[283] FSEK (n 8), art 14.
[284] ibid art 15.
[285] ibid art 16.
[286] Külahcı (n 242) 55. However, a strict application of this right could paralyze the operation of a database, which by definition requires constant updating, data entry, and structural maintenance. Therefore, legal doctrine and judicial practice seek a balance of interests. For instance, it is generally accepted that the author implicitly consents to modifications that are mandatory for the technique of usage or essential for the database's function (e.g., fixing bugs), provided these changes do not harm the author's honor or reputation, for detailed analysis see Bozbel (n 248) 108 vd; Sevi (n 253) 60.
[287] Indeed, limitations and exceptions are regulated in great detail under four different categories between Articles 30 and 47 of the Law.

i. Limitations Based on Public Interest

Judicial and Administrative Use: A typical example of public interest limitations is the use of works by courts or other official authorities in judicial proceedings.[288] This provision is similar in nature to Article 6(2)(c) of the Database Directive.

Educational Use (Anthologies): Another critical regulation for databases is the exception regarding the creation of selected and collected works for educational purposes. According to the FSEK, it is permitted to create such works by quoting from published works.[289] For instance, under this exception, a database of plant varieties could be utilized – within statutory limits – to create a biology textbook.[290] However, this quotation must be within a proportion justified by the purpose. It must not unreasonably prejudice the legitimate interests of the right holder and must not conflict with the normal exploitation of the work.[291] In this respect, it is evident that the FSEK has incorporated the 'three-step test' found in international instruments like the Berne Convention. Additionally, the source and the author's name must be cited properly.[292] This exception is subject to additional restrictions depending on the type of work. If the work utilized contains maps, plans, sketches, or models related to geography and topography, the exception applies only for the purpose of explaining the content of the educational compilation.[293] Consequently, for example, a database consisting of geographic data can only be used within this strict limit – solely to clarify or elucidate the content of an educational work.[294]

[288] FSEK (n 8), art 30(1).
[289] ibid art 34(1).
[290] Sevi (n 253) 75.
[291] FSEK (n 8), art 34(1) (The literal translation of the relevant provision is: "It must not harm the legitimate interests of the right holder without just cause and must not exceed the bounds of normal exploitation.").
[292] ibid art 34(4).
[293] ibid art 34(1).
[294] Sevi (n 253) 76.

Performance in Education: The performance or representation of published works in educational institutions for face-to-face education, without any direct or indirect commercial motive, is permitted.[295] In this respect, the source and the author's name must be cited properly. This provision can be seen as the counterpart to Article 6(2)(b) of the Directive. However, unlike the Directive, the FSEK exception is strictly limited to face-to-face education, implying that online education falls outside this scope. Moreover, unlike the Directive, the FSEK does not explicitly list 'scientific research' as a distinct exception. However, the general freedom of quotation (FSEK Article 35), which allows taking sentences or paragraphs from a public work into an independent scientific or literary work, might serve this purpose in a sense.[296]

ii. Limitations Based on Private Interest

The most controversial exception regarding databases is the private use exception. This represents the most problematic area for database protection under Turkish law.

Article 38 of the FSEK permits the reproduction of all intellectual works for personal use without the author's consent, provided that such reproduction is not for profit-making purposes. Recognizing the risks of digital piracy, the Law explicitly excludes computer programs from this broad private copying exception.[297] For computer programs, the Law provides a much narrower exception (e.g., a single backup copy) which is strictly conditional. A notable difference between the general private use exception and the computer program exception is the condition of lawful acquisition. While the computer program exception explicitly requires lawful acquisition, the general private use provision is silent on this matter.[298]

[295] FSEK (n 8), art 33.
[296] ibid art 35.
[297] Suluk (n 242) 153-154.
[298] Sevi (n 253) 70; Abuzer Kendigelen and Savaş Bozbel, 'Telif Hakları Açısından İnternette Veri Paylaşımı' ['P2P File Sharing and Copyright Law'], in Yeşim Atamer (ed), *Internet ve Hukuk* (Bilgi Üniversitesi Yayınları 2004) 510.

However, in accordance with the fundamental legal principle that exceptions must be interpreted narrowly, this 'acquisition' should be interpreted strictly as 'purchase'; thus, copying a work from a pirated or illegal source cannot fall under the protection of this exception.[299] Therefore, for example, copying a few pages from a lawfully borrowed book would be covered under this exception, as it does not harm the legitimate interests of the author. Indeed, pursuant to the Law, this right of reproduction cannot harm the legitimate interests of the right holder without just cause or be contrary to the normal exploitation of the work.[300] However, reproducing a database by accessing it through unlawful means (e.g., hacking or bypassing paywalls) would not benefit from this exception.[301]

However, a critical legal ambiguity arises regarding the status of an electronic database that is lawfully accessed or made publicly available on the internet by its owner. Indeed, the Law remains silent on this specific issue regarding electronic databases. This matter becomes even more controversial due to the fact that the FSEK does not contain a provision similar to Article 1(3) of the Database Directive, which explicitly excludes computer programs used in the making or operation of databases from the scope of database protection.

This legislative silence has led to a doctrinal debate regarding the applicability of the broad private use exception to electronic databases. According to one view, since access to an electronic database is provided via a computer program, and since the Law prescribes a much more limited private copying exception for computer programs (e.g., the requirement of lawful acquisition and the permission to make only a single backup copy if necessary for use), electronic databases should be subject to a similarly narrow regime. Or, stated more precisely,

[299] Suluk (n 242) 110-111; Kendigelen and Bozbel (n 298) 510 (The authors do not deem the use of the original copy mandatory to benefit from this exception, yet they argue that the act of acquisition must be interpreted narrowly and understood solely as purchasing).
[300] FSEK (n 8), art 38(1).
[301] Kendigelen and Bozbel (n 298) 511; contra Baş (n 241) 463.

electronic databases should not benefit from the broad private copying exception stipulated in Article 38(1).[302] However, although the FSEK does not make an explicit determination that computer programs within the scope of a database's operation are excluded from database protection, it is clear that a database and a computer program are distinct and distinguishable subject matters.[303] Therefore, it would be methodologically incorrect to apply the specific provisions regulated for computer programs to electronic databases based on such an analogy. Consequently, under the current regulations of the FSEK, and contrary to the EU Database Directive, it is legally possible to utilize the private copying exception for electronic databases.[304] This situation creates a significant harmonization gap – contrary to the intended alignment – and exposes electronic databases to the risk of digital piracy and mass replication.

Term of Protection

Finally, regarding the duration of rights, databases protected by copyright are subject to the general term of protection prescribed by the FSEK. According to Article 27, the protection lasts for the lifetime of the author and continues for 70 years after their death (*post mortem auctoris*). In cases where the database is created by multiple authors (joint work), this 70-year period begins following the death of the last surviving author.[305] If the author is a legal entity (in the rare cases where this status is recognized prior to 1995 amendments) the term is 70 years from the date the work was made public.[306]

[302] Ünal Tekinalp, *Fikrî Mülkiyet Hukuku* (5th edn, Vedat Kitapçılık 2021) 140-141; Sevi (n 253) 70; Şener (n 241) 114.
[303] Ateş (n 237) 71.
[304] Şener (n 241) 114; Sevi (n 253) 70-71; Külahcı (n 242) 80; Suluk (n 242) 157; Baş (n 241) 463.
[305] FSEK (n 8), art 27(1).
[306] ibid art 27(4).

3.3. The Sui Generis Right for Databases under Turkish Law

As discussed in the previous sections, the initial copyright amendments of 1995 failed to introduce a sui generis protection regime in Türkiye, thus leaving a significant gap in the protection of non-original databases. This deficiency was frequently highlighted in the European Commission's Progress Reports regarding Türkiye's accession.[307] To bridge this gap and achieve full alignment with the EU acquis, the sui generis right was finally incorporated into the FSEK through Law No. 5101 in 2004, which introduced Additional Article 8.[308]

3.3.1. Concept and Legal Nature

The sui generis right under Turkish law is regulated similarly to the provisions of the EU Database Directive. Additional Article 8 of the FSEK grants protection to the maker of a database who has made a substantial investment in the obtaining, verification, or presentation of the contents of a database in terms of quality or quantity. While the legislative intent was to align Turkish law with the EU acquis, the resulting regulation provides only a superficial alignment. Since all principles regarding the sui generis right are consolidated into a single article, the full text is provided below for analytical clarity:

> "***Additional Article 8***
>
> *The database maker, who has made a substantial investment in terms of quality and quantity in the obtaining, verification, or presentation of the contents of a database, has, furthermore, the right to authorize or prohibit the following regarding a substantial part or the whole of the database contents:*

[307] See Section 3.1
[308] Law No 5101, see n (239).

a) The transfer to another medium, permanently or temporarily, by any means or in any form;

b) The distribution, sale, rental, or communication to the society by any means;

subject to the exceptions listed in this Law and the exceptions required by public security and administrative and judicial proceedings.

The protection granted to the database maker shall be fifteen years from the date the database is made public.

Any qualitative or quantitative addition, removal, or modification resulting in a substantial change to the contents of the database and requiring a new investment shall qualify the resulting database for its own conditions of protection regarding this new investment.

The provisions of paragraph (3) of Article 72 of this Law shall apply to those who infringe upon the rights granted in this article."

The legal nature of this right in Türkiye mirrors the dual character observed in the EU. It is an economic right independent of copyright, designed specifically to protect investment rather than original creation. However, the drafting of the FSEK fails to reflect this distinction with the desired precision. Notably, the text uses the term 'furthermore' (TR: *ayrıca*) when introducing the principles of the sui generis right, by stating: "The database maker … has, *furthermore*, the right to authorize or prohibit …" (emphasis added). At first glance, this could be misinterpreted as implying that this right is merely an appendage or supplement to copyright database protection.

In reality, the conditions, objectives, and scopes of the sui generis right and copyright are distinct; eligibility for one does not necessitate eligibility for the other, nor does the existence

of one exclude the other.[309] Ideally, this provision should have been drafted more explicitly to articulate the independence of the two protection mechanisms. Despite these drafting ambiguities, Turkish doctrine and the judiciary correctly distinguish between the two, evaluating them as independent and separate mechanisms.

Regarding the legal nature of the right, our interpretations on the legal nature of the sui generis right envisaged by the Database Directive above (Section 3.2.1) are largely valid for its counterpart in the FSEK. For example, the sui generis right bears striking similarities to neighboring rights (related rights), such as those granted to phonogram producers or broadcasters, as both categories aim to protect financial investment. However, the FSEK does not explicitly categorize it as such and has included it independently among the additional articles in the law. Consequently, regarding Turkish law, the legal nature of the sui generis right bears the meaning of a truly unique intellectual property right independent of copyright, just as it is evaluated in EU law.[310] However, as will be seen in more detail below, it must be stated that the FSEK (and Turkish copyright law generally) has a very close relationship with unfair competition law, and therefore, the precise characterization of the right remains a complex issue.

3.3.2. The Requirement of Substantial Investment

As previously examined in Section 3.2.1, the definition of a database in Turkish law is technically located within the regulations governing copyright. However, the structural elements contained in this definition – namely, the requirements of being prepared according to a 'specific purpose and special plan' (being arranged in a systematic or methodical way) and

[309] Çolak (n 259) 27-28.
[310] Tekinalp (n 302) 141.

being ‘readable by a device’ (individually accessible by electronic or other means) – must also be taken into account when establishing the existence of a database for sui generis purposes.[311]

Once the existence of a database is established, the fundamental prerequisite for sui generis protection is the demonstration of a ‘substantial investment’.

A critical textual divergence from the EU Database Directive appears in the wording of Additional Article 8 of the FSEK regarding the nature of the investment. While Article 7(1) of the Database Directive adopts a flexible standard by stipulating that investment must be substantial qualitatively and/or quantitatively, the Turkish text explicitly employs the cumulative conjunction ‘and’ (i.e., in terms of quality and quantity). A strict literal interpretation of this provision would suggest a cumulative requirement, meaning that a database maker would need to prove that their investment is substantial both financially (quantitatively) and professionally (qualitatively) to qualify for protection. Such an interpretation would set a significantly higher threshold than the EU standard and would leave databases requiring massive capital but low technical skill (or *vice versa*) unprotected.

However, the prevailing view in Turkish legal doctrine is that this phrasing is a result of legislative inadvertence rather than a deliberate policy choice.[312] Consequently, to ensure alignment with the purpose of the law and the EU acquis, the provision is interpreted teleologically as providing alternative conditions (i.e., in terms of quality and/or quantity) rather than cumulative ones. Nevertheless, for the sake of legal certainty, a legislative amendment correcting this conjunction is deemed necessary.

[311] Ateş (n 237) 57-59; Baş (n 241) 453.
[312] Baş (n 241) 470-471; Sevi (n 253) 89.

Types of Investment and the 'Spin-off' Doctrine

Consistent with the Directive, the FSEK requires the investment to be directed at the obtaining, verification, or presentation of the contents. Turkish academic literature explains these concepts by referring directly to the principles established in Europe and the case law of the CJEU, given that a deep pool of national jurisprudence on these specific definitions has not yet accumulated.

Therefore, the distinctions regarding the types of investment or financial resources, time, effort, and energy discussed in Chapter 2 are equally applicable to the Turkish legal context. To avoid repetition, this section will only touch upon certain issues that are significant for a comparative study.

For instance, although the FSEK does not explicitly contain a spin-off exclusion, the Court of Cassation (*Yargıtay*) has adopted an approach strikingly similar to the CJEU's reasoning in the *British Horseracing Board* (BHB) case. In a relevant decision concerning a telecommunications company, the Court addressed the protection of a telephone directory database.[313] In this case, the plaintiff (a telecom operator) alleged that the defendant had copied and distributed its subscriber database online without authorization. Accordingly, the plaintiff was under a contractual obligation to record subscriber information as part of its primary activity of providing telecommunication services. The Court reasoned that the compilation of this data was a natural byproduct (spin-off) of the license to operate a telephone network, rather than an independent investment directed at the database itself. Consequently, the Court ruled that the database did not qualify for sui generis protection as it lacked the requisite substantial investment in 'obtaining' the data. Although the Court did not engage in a detailed theoretical analysis regarding the distinction between 'creation' and 'obtaining', the ruling is practically

[313] Yargıtay [Court of Cassation], 11th Civil Chamber, 14 February 2012, 2010/9679 E., 2012/1890 K.; for a comparative analysis of this decision with rulings from the CJEU and the German Federal Court see Gürpınar (n 278) 52-56.

significant as it illustrates that the spin-off principle is being accurately applied in Turkish practice.

Public Sector Information

In Turkish law, there is no general regulation prohibiting public institutions from holding intellectual property rights.[314] Consequently, there is no legal barrier preventing databases created as a result of the activities of public bodies from benefiting from sui generis protection under the FSEK, provided the investment conditions are met.

However, despite the general capacity of public bodies to hold rights, specific categories of public sector information are subject to a broad exception. According to Article 31 of the FSEK, the reproduction, distribution, adaptation, or utilization of officially published laws, decrees, regulations, and court decisions is free. Legal doctrine suggests that this freedom extends even to court decisions that have not been officially published but have been made available to the public through special efforts, as judicial decisions are inherently public and considered to be in the public domain.[315]

This provision bears critical importance when viewed through a comparative lens. Under the EU Database Directive, while Member States might be permitted to exclude official texts from copyright protection[316], the Directive does not explicitly grant Member States the same flexibility to create a broad exception for official texts under the sui generis regime. In contrast, the exception under Article 31 of the FSEK applies horizontally to both copyright and sui generis rights.

[314] Conversely, various regulations explicitly state that IP rights resulting from research projects conducted within public institutions belong to those institutions. See, for example, Law No. 6569, Art. 14(3) (Official Gazette No. 29187, 26 November 2014) (Türkiye).
[315] Bozbel (n 248) 117; Külahcı (n 242) 76.
[316] Database Directive, art 6(2)(d).

Consequently, in the case of databases consisting of court decisions or legislative texts, users may freely utilize the data contained therein. This broad exception serves as a positive safeguard against the potential monopolization of public data, particularly legal texts, which must remain accessible to all. For such databases, the boundary of sui generis protection should be drawn at 'slavish copying'. In other words, protection should only intervene in cases where the database is systematically copied in its entirety or a substantial part for commercial purposes in a manner that constitutes unfair competition, rather than preventing the re-use of the informational content itself. This interpretation strikes a reasonable balance between the interests of the investor and the public interest in access to legal information.

3.3.3. Scope of Protection: Extraction and Re-utilisation

Once the substantial investment is established, Additional Article 8 grants the maker the right to authorize or prohibit the transfer, distribution, and communication to the public of the whole or a substantial part of the database.

In this context, the term 'transfer' functionally corresponds to extraction, while 'distribution' and 'communication' correspond to re-utilisation as defined in the EU Database Directive. However, while the functional scope of these rights is intended to mirror the EU acquis, the text of the FSEK contains noteworthy terminological and structural inconsistencies.

The 'Qualitative' Gap in Infringement Analysis

Unlike the Database Directive, the FSEK does not explicitly state that the evaluation of infringement (i.e., the unauthorized use of a substantial part or the whole of the database) must be evaluated qualitatively and/or quantitatively. While the Law requires investment to be substantial in 'quality and quantity' for eligibility, this dual criterion is absent in the definition of prohibited acts. The text merely refers to 'a substantial part or the whole of the database

contents' without explicitly specifying that this substantiality can be qualitative. Consequently, a strict literal reading creates the impression that infringement is predicated solely on a quantitative threshold, potentially leaving qualitatively significant but numerically small parts outside the scope of protection.

Terminological Inconsistency: 'Communication to the Society'

In defining the right of re-utilisation, Additional Article 8 employs the term 'communication to the society' (TR: *topluma iletim*), a phrase that appears nowhere else in the FSEK. This stands in stark contrast to the standard terminology of 'communication to the public' (TR: *umuma iletim*) used consistently throughout the rest of the Law (e.g., Article 25). Although this semantic divergence may not cause significant hurdles in judicial practice, as courts generally interpret it within the standard meaning, this terminological deviation disrupts the systematic coherence of the Law.

Exceptions and Limitations

As stipulated in Additional Article 8, the exceptions and limitations applicable to copyright works under the FSEK apply *mutatis mutandis* to the sui generis right. This legislative choice reveals a system that offers significantly broader latitude for user interests compared to the EU model.

As discussed in Section 3.2.4, the FSEK regulates exceptions in a broad manner. Since these exceptions are also applicable to the sui generis right, this section will focus only on the notable divergences from the EU system rather than reiterating the general framework.

The most striking difference lies in the structural approach. The Database Directive establishes a dual regime, prescribing a specific, exhaustive list of optional exceptions for the sui generis

right (Article 9) that is distinct from the copyright exceptions. In contrast, the FSEK makes no such distinction, applying the general copyright exceptions to investment-based protection. A critical consequence of this unified approach is the lack of differentiation between electronic and non-electronic databases. While the Directive strictly precludes the private copying exception for electronic databases, the FSEK permits it regardless of the medium (as detailed in Section 3.2.4), potentially exposing electronic databases to a higher risk of unauthorized replication.

Public Lending and The Policy Paradox

A further, and perhaps more critical, divergence concerns the status of public lending. The EU Database Directive explicitly clarifies that public lending is not considered an act of extraction or re-utilisation.[317] Consequently, under the EU regime, a database maker cannot invoke their sui generis right to prevent the non-commercial lending of the database by public institutions. The FSEK contains no such specific provision.

It is worth noting that Turkish law recognizes the lending right as an exclusive right under the distribution right of authors (FSEK Article 23) and related rights holders (FSEK Article 80). Indeed, these regulations were introduced with the specific intent of harmonizing Turkish law with the EU Rental and Lending Directive (2006/115/EC).[318] However, despite this general alignment effort, it is a notable oversight that the specific limitation regarding public lending found in the Database Directive was omitted during the transposition process.

[317] Database Directive, art 7(2).
[318] Directive 2006/115/EC of the European Parliament and of the Council of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property [2006] OJ L376/28. Regarding the specific intent of harmonization, see Zehra Özkan Üner, 'Ödünç Verme Hakkı ve Kamuya Ödünç Verme Lisansı Kapsamında E-Kitaplar' ['E-Books within the Scope of the Lending Right and Public Lending Licence'] (2017) 12 Terazi Hukuk Dergisi 32, 34.

In the FSEK, the concept of re-utilisation is defined broadly as 'distribution ... by any means'. Furthermore, it is well-established that the sui generis prerogatives are perceived as a reflection of the distribution and communication to the public rights in copyright law, utilizing nearly identical terminology. Therefore, since public lending is not explicitly exempted for databases, such an act falls within the scope of re-utilisation. Consequently, it can be concluded that a database protected by the sui generis right in Türkiye cannot be subject to public lending without the authorization of the right holder.

This situation creates an interesting paradox: while the FSEK generally provides broader exceptions for users (e.g., private copying) compared to the EU, it adopts a strictly pro-rightsholder stance regarding lending. However, for a developing country like Türkiye, it could be argued that the public interest in access to information should theoretically outweigh the strict exclusive rights of authors in the context of public lending.

Notably, Article 6 of the Rental and Lending Directive (2006/115/EC) permits Member States to derogate from the exclusive public lending right and elect to treat it as a right to remuneration.[319] Had Türkiye adopted such a remuneration-based system – where public lending is treated as a limitation rather than an exclusive right – the silence of the FSEK regarding the sui generis right might have been less problematic.

Therefore, to resolve this imbalance, a legislative intervention is required. Ideally, a systemic shift regarding public lending by converting the exclusive right into a remuneration right would be more suitable for the socio-economic conditions of Türkiye. Alternatively, if the exclusive right is maintained, a specific provision explicitly stating that public lending does not constitute

[319] Goldstein and Hugenholtz (n 90) 296.

extraction or re-utilisation must be added to the FSEK, ensuring full alignment with the Database Directive as intended.

Repeated and Systematic Extraction

Finally, the FSEK diverges from the Directive by failing to include an explicit provision prohibiting the ‘repeated and systematic extraction and/or re-utilisation of insubstantial parts’ (i.e., piecemeal copying).

However, this legislative silence should not be interpreted as rendering such acts permissible. Article 38 of the FSEK, which regulates private use, incorporates the principles of the ‘three-step test’. It stipulates that reproduction for personal use must not harm the legitimate interests of the right holder without just cause or conflict with the normal exploitation of the work. Consequently, this provision suggests that repeated and systematic extraction of insubstantial parts would inevitably violate the database maker's legitimate interests or impede normal exploitation. Therefore, even in the absence of a specific clause, such parasitic acts can effectively be prevented through the interpretation of the general limitations on exceptions.

3.3.4. Duration and Ownership

The term of protection is set at fifteen years from the date the database is made public. While this duration nominally aligns with the EU Database Directive, a technical divergence exists regarding the calculation of the term. Under the FSEK, the protection period commences directly from the date of publicity. In contrast, Article 10 of the Directive stipulates that the term runs from the first of January of the year following the date of completion or the date when the database was first made available to the public. Consequently, the Turkish regulation omits the ‘end of the calendar year’ extension, resulting in a protection period that may be shorter than its European counterpart.

Similar to the Directive, any qualitative or quantitative substantial change to the contents, such as significant updates or verifications, that requires a new substantial investment, triggers a new fifteen-year protection term. This rolling term allows dynamic databases to enjoy theoretically perpetual protection, provided the investment threshold is repeatedly met.

Regarding ownership, unlike the detailed provisions governing copyright authorship, the sui generis right follows a simpler economic logic. The right vests in the 'maker', which is interpreted as the natural or legal person who bears the risk and takes initiative for the investment.[320]

3.3.5. Structural Ambiguities and Enforcement Deficiencies

Transferability and Licensing Issues

Unlike Article 7(3) of the Database Directive, which explicitly states that the sui generis right is transferable, assignable, or licensable, the FSEK lacks a specific provision clarifying the legal nature of the right in transactional contexts. However, since Additional Article 8 grants the maker the right to 'authorize or prohibit' acts, it can be deduced through interpretation that the right is capable of being subject to legal transactions, such as licensing. Given that the legislative intent was to align with the EU acquis, this approach will be consistent.

Nevertheless, the lack of explicit regulation creates significant legal uncertainty regarding the formal requirements for such transactions. The FSEK imposes strict formal requirements for copyright transactions; for instance, contracts regarding economic rights must be in writing, and the rights must be listed individually.[321] Similarly, dispositions regarding future works not yet created are deemed null and void.[322] Whether these strict validity conditions apply *mutatis*

[320] Külahcı (n 242) 46.
[321] FSEK (n 8), art 52.
[322] ibid art 48.

mutandis to the transfer or licensing of sui generis rights remains ambiguous in the absence of an explicit statutory reference. Clarifying this issue is essential for legal certainty and transactional security.

Limitations on Civil Remedies and Criminal Sanctions

The sui generis regime suffers from profound deficiencies regarding its enforcement mechanisms, placing database makers in a significantly weaker position compared to copyright holders.

Firstly, regarding civil remedies, Turkish courts have ruled that specific deterrent mechanisms available to authors (or related rights holders) are inapplicable to sui generis rights due to the lack of explicit statutory reference. Notably, Article 68 allows a rightsholder to demand compensation up to three times the amount of the license fee that would have been paid had a contract been concluded. However, the Court of Cassation has held that database makers cannot claim treble damages under Article 68 due to the lack of an explicit cross-reference in the Law, thereby limiting their financial recovery to standard actual damages.[323]

Secondly, and perhaps more critically, the criminal enforcement of the right is legally paralyzed due to legislative oversight, specifically regarding the reference to Article 72(3).[324] At the time Additional Article 8 was enacted in 2004, Article 72(3) regulated specific penal sanctions. However, Article 72 was subsequently amended in 2008, and the specific penal provisions previously applicable to sui generis infringements were entirely removed and replaced with regulations concerning circumvention of technological protection measures.[325] During these law amendments, the legislator failed to update the reference in Additional Article 8. Under the

[323] Yargıtay [Court of Cassation], 11th Civil Chamber, 13 April 2022, 2020/5940 E., 2022/2992 K.
[324] Additional Article 8 concludes by stating: "The provisions of paragraph (3) of Article 72 of this Law shall apply to those who infringe upon the rights granted in this article".
[325] Law No. 5728, Official Gazette No. 26781, 8 February 2008 (Türkiye).

strict principle of legality (*nullum crimen sine lege*), criminal sanctions cannot be imposed based on provisions that no longer exist or have been fundamentally altered to regulate different matters. Consequently, since the cross-referenced clause no longer constitutes a valid legal basis for punishment, criminal enforcement is rendered impossible.

In light of these deficiencies, it is evident that under the current structure of the FSEK, sui generis protection offers significantly weaker safeguards compared to copyright. By completely depriving the rightsholder of criminal sanctions and punitive civil remedies, the regime has, in effect, evolved into a structure that goes no further than extending the scope of unfair competition law, lacking the deterrent power typically associated with other intellectual property rights in the Turkish legal system.[326]

3.4. The Absence of Text and Data Mining Exceptions

Unlike the European Union, which has explicitly regulated TDM through Articles 3 and 4 of the CDSM Directive, Turkish law has not yet introduced any specific exception or limitation regarding TDM activities. Consequently, the legal status of TDM in Türkiye must be evaluated under the general provisions of the FSEK.

In the absence of a specific safe harbor, TDM activities, which inherently involve the reproduction of vast amounts of data, will face significant legal hurdles under both copyright and the sui generis database right. One might argue that existing exceptions in the FSEK could cover TDM activities. However, a closer examination reveals that these provisions are ill-suited for the nature of data mining. Article 38 of the FSEK permits the reproduction of intellectual works for personal use without the author's consent, provided it is not for-profit. Yet, this

[326] Baş (n 241) 473.

exception is strictly limited to personal purposes and does not extend to the activities of research institutions, tech companies, or commercial AI developers.

Furthermore, even if a TDM activity were to somehow navigate the copyright exceptions (e.g., using public domain works), it would still be precluded by the sui generis right. As discussed in Section 3.3, the maker of a database has the right to prevent the extraction and re-utilisation of the whole or a substantial part of the database contents. TDM processes, by definition, require the extraction of large volumes of data to be effective. Since TDM processes, by definition, require the extraction of large volumes of data to be effective, and considering that the FSEK lacks a specific exception analogous to the EU model, the unauthorized mining of a protected database constitutes a *prima facie* infringement. Consequently, under the current Turkish legal framework, any TDM activity involving protected databases theoretically requires the prior authorization of the rights holders. This creates a high-transaction-cost environment and legal uncertainty, potentially stifling innovation in the Turkish data-driven sectors.

Chapter 4 – Technological Protection Measures (TPMs) and the Access Crisis

4.1. The Evolution of 'Code': From Enemy to Guardian

Historically, technology has been perceived as the nemesis of copyright. From the printing press to the photocopier, technological advancements generally lowered the cost of reproduction, making 'copying' incredibly easy and challenging the exclusivity of rights holders.[327] However, the advent of the digital age and the internet brought a paradigm shift. As observed by Lessig, in the digital realm, 'code' functions as law; it regulates behavior not through threat of punishment, but through physical impossibility.[328] This new era revealed that technology is a

[327] Lawrence Lessig, *Code and Other Laws of Cyberspace* (Basic Books 1999) 124-125; George Metaxas, 'Protection of Databases: Quietly Steering in the Wrong Direction?' (1990) 12(7) EIPR 227, 230; Reichman and Samuelson (n 25) 64-65.
[328] Lessig (n 327) 6.

double-edged sword: while it facilitates the mass exploitation of protected materials, it simultaneously empowers rights holders to control their works with unprecedented precision.[329] In other words, 'code' has evolved into a weapon, a digital 'fence' that can be deployed to prevent unauthorized access or usage physically.[330]

Legally referred to as technological protection measures (TPMs), these tools range from encryption on e-books and anti-screenshot technologies on streaming platforms like Netflix, to complex access codes, or copy-control mechanisms to prevent unauthorized acts on commercially sensitive databases.[331] The widespread implementation of these specific measures also paved the way for the establishment of comprehensive Digital Rights Management (DRM) ecosystems.[332]

However, the democratizing nature of technology meant that the same tools used to build these fences could also be used to dismantle them. A classic example is the rapid cracking of early DVD encryption.[333] Consequently, legislators realized that technical measures alone were insufficient; they needed legal backing. This led to a new layer of regulation: anti-circumvention rules. The aim was to target the source of the infringement by criminalizing the

[329] ibid 125.
[330] Ian R Kerr, Alana Maurushat and Christian S Tacit, 'Technological Protection Measures: Tilting at the Copyright Windmill' (2003) 34:1 Ottawa Law Review 9, 13; Baron (154) 892.
[331] Derclaye (n 5) 194.
[332] Although these terms are often used interchangeably, a conceptual distinction exists. TPMs refer to individual technologies specifically designed to impede access or copying. In contrast, DRM denotes a complex rights management ecosystem. Rather than merely blocking access, DRM systems create a controlled environment where content usage is governed by the rights holder's terms, effectively integrating TPMs with payment mechanisms, identification systems, and contractual measures. See, Lucie Guibault, Guido Westkamp and Thomas Rieber-Mohn, 'Study on the Implementation and Effect in Member States' Laws of Directive 2001/29/EC on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society' (2012) Amsterdam Law School Research Paper 2012-28, 14; Moscon (n 194) 10.
[333] Séverine Dusollier, 'DRM at the Intersection of Copyright Law and Technology: A Case Study for Regulation' in Eric Brousseau, Meryem Marzouki and Cécile Méadel (eds), *Governance, Regulations and Powers on the Internet* (Cambridge University Press 2012) 297, 300.

tools (software/devices) used to bypass these measures, effectively trying to destroy the 'burglary tools' before they could be used.[334]

This evolution has resulted in a formidable 'three-layered' protection structure, as conceptualized by Dusollier.[335] In the specific context of databases, the first layer is the statutory exclusive rights of database authors (copyright) and makers (sui generis right). The second layer consists of the TPMs implemented by the rightsholders. In the specific context of text and data mining, for instance, 'honeypots'[336] and 'CAPTCHA'[337] serve as prominent examples of such technical barriers deployed against data scraping. The third layer comprises the statutory anti-circumvention rules that legally protect these technical locks themselves from being broken.

While this multi-layered approach was designed to safeguard substantial investments, it has introduced profound legal and ethical challenges. Technical measures are binary; they lack the nuance of law. A digital lock cannot distinguish between a pirate copying data for illegal resale and a researcher performing lawful TDM. Consequently, TPMs grant rights holders a *de facto* monopoly and absolute control that may exceed the boundaries set by copyright law itself.[338] By enforcing technical restrictions that ignore statutory exceptions, such as those for scientific research or educational purposes, rights holders can effectively rewrite the social contract underlying copyright law – namely, the societal bargain that grants authors exclusive rights in

[334] Séverine Dusollier, 'Electrifying the Fence: The Legal Protection of Technological Measures for Protecting Copyright' [1999] EIPR 285.
[335] Dusollier n (333) 301-302.
[336] Honeypots are security deception mechanisms that mimic real systems to lure and detect unauthorized actors. In the context of automated data collection, they often function as 'crawler traps', designed to prolong the engagement of scraping bots to slow them down or gather information about their methods. See Elisa Chiapponi, 'Detecting and Mitigating the New Generation of Scraping Bots' (PhD thesis, Sorbonne Université 2023) 20-21.
[337] CAPTCHA requires users to identify distorted characters to distinguish humans from machines. It functions as a code-based barrier often used to implement contract-based restrictions, specifically prohibiting the use of automated bots on a website. See Cyrus Y Chung, 'The Computer Fraud and Abuse Act: How Computer Science Can Help with the Problem of Overbreadth' (2010) 24 Harv JL & Tech 233, 254.
[338] Derclaye (n 5) 195-197.

exchange for purpose-bound and limited public access to protected works – creating a system of 'private ordering' that overrides public law balances.[339]

Despite these inherent risks of over-protection, the legal recognition of TPMs is firmly rooted in international law. The normative foundation for this regime was laid by the WIPO Internet Treaties (1996). Specifically, Article 11 of the WCT and Article 18 of the WIPO Performances and Phonograms Treaty (WPPT) mandate contracting parties to provide adequate legal protection against the circumvention of effective technological measures.[340] Both the European Union and Türkiye have adapted their legal systems to comply with these treaties, introducing regulations to protect TPMs. However, as the following sections will demonstrate, the implementation of these rules, specifically the balance struck between protection of the digital lock and the user's access to the locked content, differs significantly between the two jurisdictions.

4.2. The EU Approach

4.2.1. Legal Basis under the InfoSoc and CDSM Directives

The EU legal framework attempts to strike a delicate balance in this regard: on one hand, it establishes a robust regime against the circumvention of these technological measures; on the

[339] Derclaye (n 5) 199; Séverine Dusollier, 'Sharing Access to Intellectual Property Through Private Ordering' (2007) 82 Chi-Kent L Rev 1391, 1393; Moscon (n 194) 2. This theoretical risk is substantiated by empirical data. A survey conducted by the Association of European Research Libraries (LIBER) in 2020 reveals that publishers actively utilize TPMs to impede TDM activities even for institutions with lawful access. The survey data indicate that 50% of blocking instances involved IP address suspensions, often cutting off campus-wide access to paid subscriptions, while 12.5% involved the deployment of CAPTCHAs specifically to frustrate automated collection. Furthermore, the report highlights that resolving these 'lock-outs' took an average of 24 days, a significant delay that risks driving researchers toward unauthorized alternatives such as Sci-Hub to bypass restrictions, thereby triggering a technological 'arms race'. See: LIBER Europe, 'Europe's TDM Exception for Research: Will It Be Undermined By Technical Blocking From Publishers?' (LIBER Europe, 10 March 2020) <https://libereurope.eu/article/tdm-technical-protection-measures/> accessed 12 January 2026.

[340] Furthermore, these treaties also introduced obligations regarding the protection of Rights Management Information (RMI) – which is relevant for Digital Rights Management – under Articles 12 of the WCT and 19 of the WPPT, ensuring the integrity of data that identifies the work, the author, or the terms and conditions of use.

other hand, it aims to prevent the exploitation of TPMs to the point of over-protection, ensuring that technical restrictions do not unduly encroach upon the legitimate rights of users.

The foundational legal protection for TPMs is established in Article 6 of the InfoSoc Directive (2001/29/EC). This article requires Member States to provide adequate legal protection against the circumvention of any 'effective' technological measures. A measure is deemed 'effective' where the use of a protected work is controlled by the rightsholders through an access control or protection process, such as encryption or scrambling that achieves the protection objective.[341]

Although the Database Directive does not contain detailed anti-circumvention provisions, Article 6(3) of the Directive explicitly defines 'technological measures' to include any technology designed to prevent acts not authorized by the holder of copyright or the sui generis right provided for in the Database Directive. Consequently, the InfoSoc Directive provides a direct statutory basis for the protection of digital locks applied to both creative and non-creative databases.

To prevent TPMs from nullifying user rights, Article 6(4) of the InfoSoc Directive obliges Member States to take 'appropriate measures' to ensure that beneficiaries of certain exceptions are provided with the means to exercise them. However, this safeguard is structurally weak due to three main limitations. First, the mechanism is secondary; it only triggers in the absence of voluntary measures taken by rightsholders. The system primarily relies on rightsholders to police themselves.[342] Second, the safeguard does not cover all exceptions, but only a closed list defined within the InfoSoc Directive itself. Although the final sentence of the paragraph explicitly states that these provisions apply *mutatis mutandis* in the context of rights provided

[341] CDSM Directive (n 9) art 6(3).
[342] Dusollier (n 333) 312-313; Séverine Dusollier, 'The Protection of Technological Measures: Much Ado about Nothing or Silent Remodeling of Copyright?' in Rochelle Cooper Dreyfuss and Jane C Ginsburg (eds), *Intellectual Property at the Edge: The Contested Contours of IP* (Cambridge University Press 2014) 253, 263.

in the Database Directive, the selection of covered exceptions has been criticized as arbitrary and random.[343] While the mechanism encompasses certain minor uses, it inexplicably omits significant public interest exceptions, such as news reporting, leaving them vulnerable to technical blocking.[344] Finally and most critically, the fourth subparagraph of Article 6(4) stipulates that the obligation to facilitate access does not apply to works made available to the public on agreed contractual terms in such a way that members of the public may access them from a place and at a time individually chosen by them (on-demand services). Since modern commercial databases are almost exclusively offered as 'on-demand' online services, this provision effectively renders the safeguard mechanism obsolete for the vast majority of digital content, prioritizing contractual freedom over user rights.[345]

Recognizing these failures, the CDSM Directive reaffirms the role of TPMs but introduces a reinforced safeguard specifically for the new TDM exceptions. Article 7(2) of the CDSM Directive stipulates that the safeguard mechanism of InfoSoc Article 6(4) applies to the exceptions introduced with the CDSM Directive, notably the TDM exception for scientific research. Crucially, however, the Directive makes a selective reference: it applies the first, third, and fifth subparagraphs of Article 6(4), therefore deliberately omits the fourth subparagraph (the 'on-demand' loophole). This legislative choice is of paramount importance. It implies that for a mandatory TDM exception, the 'on-demand' exclusion does not apply. Therefore, even if a database is offered as an on-demand service under contractual terms, rightsholders are legally obliged to allow TDM activities for scientific research. If they fail to do so voluntarily, then Member States must intervene. Thus, unlike the general regime, the CDSM Directive regime

[343] Guibault, Westkamp and Rieber-Mohn (n 332) 110.
[344] ibid.
[345] Dusollier (n 333) 313; Margoni and Kretschmer (n 215) 695.

theoretically closes the ‘on-demand’ gap partially, offering a much stronger statutory position for researchers.

4.2.2. The Nintendo Case and the Proportionality Standard

The tension between TPMs and lawful use was famously adjudicated by the CJEU in the *Nintendo v. PC Box*[346] case. Although the case concerned video games, its principles regarding TPMs are applicable to databases. In this case, Nintendo utilized specific TPMs (recognition systems and encryption) on its DS and Wii consoles to prevent the use of illegal copies of video games. PC Box marketed ‘modchips’ that circumvented these measures. Nintendo brought proceedings against PC Box, alleging that the actual purpose of the PC Box equipment was to circumvent and avoid the TPMs on their consoles. PC Box argued, however, that their devices were not solely for piracy but were also used for legitimate purposes, such as playing independent games, listening to MP3s, and watching movies, which Nintendo’s TPMs indiscriminately blocked.[347]

The Court ruled that legal protection for TPMs is not absolute. It is granted only to measures that are ‘proportionate’ and do not prohibit devices or activities that have a commercially significant purpose or use other than infringing copyright.[348] The Court emphasized that TPMs must not go beyond what is necessary to achieve the protection objective.[349] Crucially, the Court provided specific criteria for this assessment. Accordingly, it must be examined whether other measures could have caused less interference with legitimate third-party activities while still providing comparable protection.[350] To determine this, the Court listed several factors to be taken into account, *inter alia*, the relative costs of different types of technological measures, the

[346] Case C-355/12 *Nintendo Co Ltd and Others v PC Box Srl and 9Net Srl* EU:C:2014:25 (*Nintendo v. PC Box*).
[347] ibid para 15.
[348] ibid para 30.
[349] ibid para 31.
[350] ibid para 32.

technological and practical aspects of their implementation, and a comparison of the effectiveness of those measures, with the explicit caveat that 'effectiveness need not be absolute'.[351]

Before applying the proportionality test, the Court also clarified that the protection referred to in Article 6 of the InfoSoc Directive applies only to protect the rightholder against acts which require their authorization (e.g., reproduction, communication to the public).[352] This highlights a crucial distinction. TPMs are not protected in isolation. If a technological measure is deployed to restrict acts that are outside the scope of copyright (e.g., accessing non-protected data), then circumventing such a measure does not fall under this specific legal prohibition. Therefore, the Court implicitly ruled that using TPMs to restrict non-IP-protected content goes beyond the boundaries of the Directive.

Applying this *ratio decidendi* to databases implies that TPMs should not prevent lawful users from accessing the database for legitimate purposes, such as consulting the data or performing TDM under Article 3 of the CDSM Directive. A database maker cannot justify a total blocking mechanism (e.g., blanket IP bans) simply because it is the cheapest or easiest option if a more sophisticated method would cause less interference with lawful TDM activities. Furthermore, based on the Court's reasoning that protection need not be absolute, rightsholders cannot demand a zero-risk environment at the expense of suffocating all legitimate research.

4.3. The Turkish Legal Framework regarding TPMs

Unlike the nuanced (albeit complex) approach of the EU, the Turkish legal framework regarding TPMs is characterized by rigid protectionism and structural inconsistencies. The relevant provision is found in Article 72 (penal provisions) of the Law on Intellectual and

[351] ibid para 33.
[352] ibid paras 24-25.

Artistic Works (FSEK), introduced to harmonize Turkish law with the WIPO Treaties and the EU acquis.

4.3.1. The Anti-Circumvention Regime (FSEK Article 72)

Given the profound enforcement deficiencies discussed in Section 3.3.5 (particularly the inapplicability of deterrent civil and criminal remedies available for copyright infringement but not for sui generis rights holders), database makers might be expected to rely on TPMs as a primary safeguard. However, a closer examination of the FSEK reveals a secondary, and perhaps more surprising, legal gap regarding anti-circumvention rules.

Article 72 of FSEK establishes a severe anti-circumvention regime, but its scope is strictly limited to preparatory acts. It imposes imprisonment (from 6 months to 2 years) on any person who creates, imports, distributes, sells, rents, or possesses for commercial purposes any programs or technical equipment designed to circumvent TPMs. It also penalizes those who offer advertising, marketing, or design services for such tools.

Crucially, however, the provision does not explicitly criminalize the act of circumvention itself. It targets the traffickers of the ‘burglary tools’, not the individual user who breaks the lock. Consequently, if a user has lawful access and relies on a valid statutory exception – such as illustration for teaching or personal use – the mere act of bypassing a TPM to exercise that right does not constitute a crime in itself under Article 72.

4.3.2. The Ambiguity of the Right to Lock

The implications of this legislative structure extend beyond criminal law. The most intriguing aspect of the Turkish framework is the absence of a provision explicitly prohibiting the act of circumvention as an independent civil infringement. This silence creates a crucial legal

question: Does a user who has lawful access and relies on a valid statutory exception (e.g., private copying) commit an infringement solely by bypassing a TPM?

As the act of circumvention itself is not defined as an infringement in the Law,[353] the FSEK does not technically grant rightsholders a 'right to lock'. Specific regulations regarding computer programs aside,[354] this structure suggests that if a user has lawful access and relies on a valid statutory exception, the mere act of bypassing a TPM does not constitute an infringement. This legislative gap might (intentionally or not) serve as a balanced approach. The Turkish system theoretically mitigates the risks of establishing a '*de facto* monopoly' over data.

The situation is more complex for text and data mining (TDM), on the other hand. Since Turkish law does not recognize a specific TDM exception, if a researcher bypasses a TPM on a protected database to conduct data mining, this act would likely infringe the rightsholder's economic rights. However, a strict legal distinction applies: liability arises from the infringement of the underlying copyright or sui generis right (unauthorized copying), not from the act of circumvention itself. If the circumvention involves unauthorized entry into a secured system (e.g., hacking a server password without authorization), it could trigger liability under Article 243 of the Turkish Penal Code for 'unauthorized access to an information system'.[355] Therefore, having lawful access, such as a valid subscription, is a prerequisite to avoid penal sanctions in this context.

[353] While Additional Article 4 prohibits the removal or alteration of rights management information (RMI), it does not explicitly prohibit the act of bypassing access control measures.
[354] FSEK Article 38 expressly excludes computer programs from the scope of the private copying exception, implying a stricter protection regime for software that does not automatically extend to databases or other works.
[355] Law No 5237 Turkish Penal Code (*Türk Ceza Kanunu*), Official Gazette 12 October 2004 No 25611 (Türkiye), Art 243. This article penalizes anyone who unlawfully enters a part or the whole of an information system or remains there.

However, this structure also creates a sharp contrast with the implementation of the InfoSoc Directive. The Directive establishes a two-pronged protection: while Article 6(1) mandates Member States to provide legal protection against the act of circumvention itself, Article 6(2) targets the trafficking of devices (preparatory acts).[356] A close analysis of FSEK reveals a selective transposition. The Turkish legislator appears to have adopted the logic of Article 6(2) and embodied it in the penal sanctions of Article 72 against the suppliers of circumvention tools, while omitting a counterpart to Article 6(1). It must be acknowledged that this deviation constitutes a failure to fully align with the EU acquis. By omitting the prohibition on the act of circumvention mandated by Article 6(1) of the InfoSoc Directive, the Turkish framework falls short of achieving full harmonization, leaving the legal status of TPMs in a state of partial compliance.

4.4. Critique and Proposal: From an Obligation to Facilitate to a Right to Access

The analysis in the preceding sections reveals a fundamental structural tension in the modern copyright architecture. While substantive copyright laws increasingly recognize the vital importance of data analysis – evidenced by the introduction of mandatory TDM exceptions and regulations regarding data obtained from IoT devices in the EU – the anti-circumvention regime of TPMs effectively grants rightsholders a 'technological veto' over these statutory permissions.[357]

The current legal remedy provided by the EU acquis (the safeguard mechanism under Article 6(4) of the InfoSoc Directive) is structurally ill-suited for the dynamic era of AI and Big Data.[358]

[356] For instance, Section 95a(1) of the German Copyright Act (*Urheberrechtsgesetz* – UrhG) explicitly stipulates that effective technological measures 'may not be circumvented' without the consent of the right holder. English version available at https://www.gesetze-im-internet.de/englisch_urhg/englisch_urhg.html accessed 12 January 2026.
[357] Moscon (n 194) 2.
[358] Margoni and Kretschmer (n 215) 695.

As analyzed in Section 4.2.1, this mechanism is inherently secondary; it is designed to trigger only in the absence of voluntary measures taken by rightsholders. Consequently, rather than guaranteeing immediate access for lawful use, the system prioritizes the commercial choices of rightsholders, leaving the effective exercise of mandatory exceptions contingent upon their willingness or the fragmented implementation of national rules.[359]

4.4.1. Re-evaluating the Exceptions

To re-establish this balance, the legal characterization of copyright exceptions must be revisited. Historically viewed merely as 'defences' to infringement claims, copyright exceptions are increasingly recognized in legal doctrine and jurisprudence as functioning as positive user rights.[360] This is especially important where an exception gives concrete expression to a fundamental right and is mandated by EU law, because allowing it to be neutralised through technological measures raises serious concerns from the perspective of the hierarchy of norms.[361]

This reconceptualization is not merely theoretical but is already reflected, albeit implicitly, in sector-specific EU legislation. The Database Directive itself contains the germs of this approach. Articles 6(1) and 8 explicitly state that the author or the maker of a database 'may not prevent' a lawful user from extracting and re-utilizing insubstantial parts or performing acts

[359] Mireille van Eechoud and others, *Harmonizing European Copyright Law: The Challenges of Better Lawmaking* (Information Law Series 19, Kluwer Law International 2009) 174.
[360] Christophe Geiger and Elena Izyumenko, 'From Internal to External Balancing, and Back? Copyright Limitations and Fundamental Rights in the Digital Environment' in Julian Lopez and Conception Saiz Garcia (eds), *Digitalización, acceso a contenidos y propiedad intelectual* (Dykinson 2022) 103, 127. For example, the CJEU has indicated in landmark cases such as *Funke Medien*, *Spiegel Online*, and *Pelham*, that copyright exceptions are closely linked to the exercise of fundamental rights, in particular the freedom of the media and freedom of the arts. For detailed information, see Sabine Jacques, 'On the Wax or Wane? The Influence of Fundamental Rights in Shaping Exceptions and Limitations' in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021) 281, 284.
[361] Derclaye (n 5) 204.

necessary for access. This statutory language creates a positive 'right to use' rather than a mere tolerance or exception.

Moreover, a structural analysis of the EU copyright acquis provides important clues as to this paradigm shift. While the InfoSoc Directive largely left the implementation of exceptions to the discretion of the Member States, the more recent CDSM Directive marks a significant departure by designating exceptions as mandatory. When this legislative choice is considered alongside the broader European Strategy for Data, which explicitly seeks to enhance access to and the use of data, the direction of travel becomes evident. Taken together, these developments suggest that a paradigm shift, moving away from purely defensive mechanisms towards the emergence of a positive 'right of access', is already on the horizon.[362]

4.4.2. Re-defining the Limits of TPMs

One simple solution to this paradox lies in recognizing that the protection of TPMs is not absolute but accessory to the copyright it protects.[363] The primary purpose of TPMs is to prevent copyright infringement, not to monopolize access to information or to extend control over non-copyrightable data.

In this context, the CJEU's standards established in *Nintendo v. PC Box* become central, as the Court clarified that the protection referred to in Article 6 of the InfoSoc Directive applies only to protect the rightholder against acts which require their authorization (e.g., reproduction, communication to the public).[364] Applying this reasoning to the context of databases reveals a

[362] Geiger and Izyumenko (n 360) 128. More information about the concept of user rights in general, see Christophe Geiger and Bernd Justin Jütte, 'Copyright as an Access Right: Concretizing Positive Obligations for Rightholders to Ensure the Exercise of User Rights' (2024) 73 GRUR International 1019; Christophe Geiger and Bernd Justin Jütte, 'Conceptualizing a "Right to Research" and Its Implications for Copyright Law: An International and European Perspective' (2022) PIJIP/TLS Research Paper Series No 77; Maurizio Borghi, 'Exceptions as Users' Rights?' in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021); Moscon (n 194).
[363] van Eechoud and others (n 359) 177.
[364] *Nintendo v. PC Box*, para 25.

clear limitation: if a TPM – such as a honeypot or a CAPTCHA, which are widely deployed against scrapers – blocks a lawful TDM activity performed by a legitimate user (e.g., a university with a valid subscription) without serving a necessary protective function against piracy, it exceeds the bounds of the anti-circumvention mechanism.

Consequently, the legal framework should recognize a doctrine of 'lawful circumvention' for specific public interest purposes.[365] This does not imply a general 'right to hack', but rather a targeted immunity. If a lawful user bypasses a TPM solely to exercise a mandatory, non-waivable right (such as TDM for scientific research), this act should be deemed lawful. Since the law forbids rightsholders from restricting this activity by contract (Article 7 CDSM), it is logically inconsistent to allow them to restrict it by technology.

4.4.3. The Turkish Context: Turning a Gap into a Model

This brings us back to the unique position of Turkish law. As identified in Section 4.3, the FSEK currently contains a distinct legislative structure regarding TPMs: while Article 72 severely punishes the trafficking and supply of circumvention tools, it does not explicitly define the act of circumvention itself as an infringement.

While this structure is, in fact, a legislative gap or a failure of full harmonization with the EU acquis, this thesis argues that it also constitutes a strategic advantage and paves the way for a possible solution to the 'lock-in' problems observed in the EU. By not explicitly prohibiting the act of circumvention itself, Turkish law creates a *de facto* safe harbor for users who have lawful access to a protected database.

[365] Reto M Hilty, 'Intellectual Property and Private Ordering' in Rochelle Dreyfuss and Justine Pila (eds), *The Oxford Handbook of Intellectual Property Law* (Oxford University Press 2018) 920.

It is crucial to emphasize that this approach does not (and should not) leave TPMs entirely unprotected. By criminalizing the preparatory acts, such as the manufacturing or distribution of circumvention devices, the law aims to cut off the supply of piracy tools at the source. However, regarding the individual act of circumvention, this gap unintentionally aligns with the accessory nature of TPM protection. In this context, prohibiting the act of circumvention *per se* becomes legally redundant and potentially harmful. If the user benefits from an exception (e.g., TDM for research) or performs a non-infringing act, the circumvention merely enables a lawful exercise of rights. Punishing this act would mean elevating 'code' above the statutory exceptions intended by the legislator. If the user bypasses the TPM to commit an infringement (e.g., unauthorized reproduction or distribution), the underlying act is already actionable under copyright law. The rightsholder can seek remedies for the copyright infringement itself.

Therefore, creating a separate, independent liability for the act of circumvention creates an unnecessary layer of protection that risks suffocating legitimate innovation.[366] By avoiding this over-protection, the Turkish framework allows for a more balanced application where TPMs serve their true purpose: preventing piracy, not policing research.

Chapter 5 – Conclusion and Recommendations

5.1. The Systemic Fatigue of the FSEK and the Need for a Total Overhaul

Throughout this study, specific discrepancies between Turkish Law and the EU acquis regarding database protection have been identified, ranging from the differences between the concept of originality to the unintentional severance of criminal sanctions. However, these specific issues are merely symptoms of a broader pathology. The FSEK has undergone numerous amendments over the decades to comply with diverse international treaties and

[366] Derclaye (n 5) 209.

Customs Union obligations. These fragmented interventions have transformed the FSEK into a patchwork legislation, suffering from systemic incoherence. The conflicting terminologies (e.g., ‘compilations’ vs. ‘databases’), the misplaced definitions, and the cross-referencing errors demonstrate that the Law has reached a point where it can no longer support the weight of the digital age through mere amendments.

Therefore, the primary recommendation of this thesis regarding the Turkish legal framework extends beyond simple harmonization adjustments. Türkiye is in dire need of a completely new, modern Copyright Act designed from the ground up to address the realities of the information society. Such a reform should not be a hasty translation of foreign texts but a systematic reconstruction that integrates the harmonization deficiencies identified in this study – such as the ‘and/or’ investment threshold and the classification of sui generis rights – into a coherent, holistic code.

5.2. Re-evaluating the Enforcement Gaps

While the need for a modern law is undeniable, the current deficiencies in the Turkish framework warrant a nuanced re-evaluation. As analyzed in Chapters 3 and 4, the Turkish regime currently lacks the treble damages deterrent for sui generis infringement and does not explicitly criminalize the act of circumventing TPMs by lawful users. From a traditional perspective, these are enforcement gaps. However, given the controversial nature of the sui generis right, which has been criticized for potentially creating data monopolies, and the modern trend towards broadening access to information (e.g., the EU’s recent adoption of mandatory TDM exceptions in the CDSM Directive, or the new limitations introduced with the Data Act regarding the machine-generated data), these wider ‘gaps’ in Turkish law might actually be viewed as favorable.

In an era where the EU is struggling to carve out exceptions for AI training against a backdrop of rigid protection, the Turkish framework's lack of over-enforcement unintentionally creates a 'safe harbor' for innovation. It prevents the monopolization of facts and ensures that the sui generis right does not become an insurmountable barrier to entry for startups and researchers. Therefore, in drafting the new Law, the legislator should be cautious not to blindly close these gaps in the name of harmonization. Instead, these flexible spaces should be codified consciously to balance monopoly rights with the public interest in research and innovation.

That being said, relying on legislative gaps is not a sustainable strategy for a developing economy. The mere fact that enforcement is weak does not equate to the existence of a clear legal right. As highlighted throughout this study, Türkiye has not yet adopted specific TDM exceptions analogous to Articles 3 and 4 of the CDSM Directive. Consequently, TDM activities remain in a legal grey area, theoretically requiring authorization for every extraction. This legal uncertainty creates high transaction costs and deters investment. While Turkish startups might be shielded from liability due to the gaps mentioned above, they still face a significant competitive disadvantage compared to their European counterparts, who operate under a regime that provides explicit, mandatory exceptions for research and innovation. Therefore, a modern Copyright Act must replace these accidental gaps with intentional, clearly defined exceptions and limitations.

5.3. Theoretical Outlook: From 'Exceptions' to a 'Right to Access'

This tension between protection and innovation compels us to revisit the fundamental nature of copyright exceptions. As demonstrated in Chapter 4, the dominance of TPMs threatens to override statutory exceptions, effectively allowing 'code' to rewrite the 'law'. If technical locks can unilaterally prevent acts that the legislator has deemed permissible (such as private copying or scientific research), the traditional view of exceptions as mere 'defenses' becomes

insufficient. If the domain of the user continues to shrink under the pressure of digital locks and expansive investment rights, a paradigm shift is arguably necessary. We must move towards widely recognizing these limitations not merely as exceptions to an exclusive right, but as positive 'Users' Rights' or a fundamental 'Right to Access'. In this evolving legal landscape, particularly concerning the fundamental building blocks of knowledge held in databases, the law must guarantee that technical power does not extinguish the public's right to participate in the data economy.

However, this should not be misconstrued as a plea to leave investments unprotected or to disregard the legitimate economic interests of rightsholders. On the contrary, the aim is to establish a sustainable equilibrium where user rights are recognized without undermining the incentive to invest. As extensively discussed throughout this study, the foundational objective of the Database Directive was never to create absolute monopolies, but specifically to strike a delicate balance between stimulating investment in data production and safeguarding the free flow of information.

5.4. Final Remarks

In conclusion, while 'balance' may appear to be a semantically simple concept, its practical application remains one of the most arduous challenges in jurisprudence. Indeed, establishing this equilibrium is arguably the *raison d'être* of the legal system. However, the critical question is not merely whether to balance, but where to shift the weight of the scales in a landscape shaped by dynamic societal needs. As these variables constantly fluctuate, the mechanisms of law must remain adaptive. Yet, amidst this flux, our compass must be set on a singular, common objective: innovation. Whether through granting exclusive rights to authors or preserving a robust public domain for future creators, the ultimate goal remains the same.

Therefore, innovation must serve as the unwavering ‘true north’, guiding the calibration of interests between protection and access.

Bibliography

Academic Literature

Andic F and Reisman A, 'Migration and Transfer of Knowledge: Refugees from Nazism and Turkish Legal Reform' (2007) *forum historiae iuris* <https://forhistiur.net/2007-07-reisman-andic> accessed 12 January 2026.

Araújo Sousa e Silva N, *The Ownership Problems of Overlaps in European Intellectual Property* (1st edn, Nomos Verlagsgesellschaft mbH 2014) <http://www.jstor.org/stable/j.ctv941rmt> accessed 12 January 2026

Ateş M, 'Veri Tabanlarının Hukukî Koruması' ['Legal Protection of Databases'] (2006) 55(1) Ankara Üniversitesi Hukuk Fakültesi Dergisi 47

Baron P, 'Back to the Future: Learning from the Past in the Database Debate' (2001) 62 Ohio St LJ 879

Baş K, 'Dijital Platformlar ve Veri Tabanı Koruması' ['Digital Platforms and Database Protection'] (2025) 31(1) Marmara Üniversitesi Hukuk Fakültesi Hukuk Araştırmaları Dergisi 449

Benkler Y, 'Constitutional Bounds of Database Protection: The Role of Judicial Review in the Creation and Definition of Private Rights in Information' (2000) 15 Berk Tech LJ 535

Beunen A C, 'Geschriftenbescherming: The Dutch Protection for Non-original Writings' in P B Hugenholtz, A A Quaedvlieg and D J G Visser (eds), *A Century of Dutch Copyright Law – Auteurswet 1912–2012* (DeLex 2012) <https://hdl.handle.net/1887/20321> accessed 12 January 2026

Bitton M, 'New Outlook on the Economic Dimension of the Database Protection Debate, A' (2006) 47 IDEA 93

—— 'Exploring European Union Copyright Policy through the Lens of the Database Directive' (2008) 23 Berkeley Tech LJ 1411

Borghi M, ‘Exceptions as Users’ Rights?’ in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021)

Bozbel S, *Fikri Mülkiyet Hukuku* [Intellectual Property Law] (Oniki Levha Yayıncılık, 2015)

Bozgeyik H, Fikir ve Sanat Eserlerinde Hususiyet [Originality in Intellectual and Artistic Works] (2009) 25(3) BATIDER 169

Cardinale P J, ‘Sui Generis Database Protection: Second Thoughts in the European Union and What It Means for the United States’ (2006-2007) 6 Chi-Kent J Intell Prop 157

Chiapponi E, ‘Detecting and Mitigating the New Generation of Scraping Bots’ (PhD thesis, Sorbonne Université 2023)

Chung C Y, ‘The Computer Fraud and Abuse Act: How Computer Science Can Help with the Problem of Overbreadth’ (2010) 24 Harv JL & Tech 233

Cornish W R, ‘1996 European Community Directive on Database Protection’ (1996) 21 Colum-VLA JL & Arts 1

Çolak U, ‘Topluluk ve Türk Hukukunda Veri Tabanlarına Sağlanan Sui Generis Koruma ve Spin-Off Teori’ [‘Sui Generis Protection of Databases in Community and Turkish Law, and the Spin-Off Theory’] 2005) (1) Ankara Barosu Fikri Mülkiyet ve Rekabet Hukuku Dergisi 19

Davison M J, *The Legal Protection of Databases* (Cambridge Univers*ity Press 2003)*

—— ‘Database Protection: The Commodification of Information’ in Lucie Guibault and P Bernt Hugenholtz (eds), *The Future of Public Domain: Identifying the Commons in Information Law* (Kluwer Law International 2006)

—— ‘Database Protection: Lessons from Europe, Congress, and WIPO’ (2007) 57 Case W Res L Rev 829

Derclaye E, *The Legal Protection of Databases: A Comparative Analysis* (Edward Elgar 2008)

—— ‘The Database Directive’ in Irini Stamatoudi and Paul Torremans (eds), EU Copyright Law (Edward Elgar Publishing 2021)

Derclaye E and Husovec M, ‘Sui Generis Database Protection 2.0: Judicial and Legislative Reforms’ (2022) 44(6) EIPR 323

Dobreva A, ‘The Database Directive in the Landscape of Modern Databases’ (2024) 22 Facta Universitatis, Series: L & Pol 235

Dornis T W, ‘The Training of Generative AI Is Not Text and Data Mining’ (2025) 47 EIPR 65

Drexl J, ‘Data Access as a Means to Promote Consumer Interests and Public Welfare – An Introduction’ in German Federal Ministry of Justice and Consumer Protection and Max Planck Institute for Innovation and Competition (eds), *Data Access, Consumer Interests and Public Welfare* (Nomos 2021)

—— ‘Connected Devices – an Unfair Competition Law Approach to Data Access Rights of Users’ in German Federal Ministry of Justice and Consumer Protection and Max Planck Institute for Innovation and Competition (eds), *Data Access, Consumer Interests and Public Welfare* (Nomos 2021)

Dusollier S, ‘Electrifying the Fence: The Legal Protection of Technological Measures for Protecting Copyright’ [1999] EIPR 285

—— ‘Sharing Access to Intellectual Property Through Private Ordering’ (2007) 82 Chi-Kent L Rev 1391

—— ‘DRM at the Intersection of Copyright Law and Technology: A Case Study for Regulation’ in Eric Brousseau, Meryem Marzouki and Cécile Méadel (eds), *Governance, Regulations and Powers on the Internet* (Cambridge University Press 2012) 297

—— ‘The Protection of Technological Measures: Much Ado about Nothing or Silent Remodeling of Copyright?’ in Rochelle Cooper Dreyfuss and Jane C Ginsburg (eds), *Intellectual Property at the Edge: The Contested Contours of IP* (Cambridge University Press 2014) 253

—— ‘The 2019 Directive on Copyright in the Digital Single Market: Some Progress, a Few Bad Choices, and an Overall Failed Ambition’ (2020) 57 Common Market Law Review 979

Edwards J, ‘Has the Dreaded Data Doomsday Arrived: Past, Present, and Future Effects of the European Union’s Database Directive on Database and Information Availability in the European Union’ (2004) 39 Ga L Rev 215

van Eechoud M, ‘Database Rights in the EU’s Data Strategy: A Question of Sport?’ in Natalie Helberger and others (eds), *Intellectual Property and Sports: Essays in Honour of P Bernt Hugenholtz* (Information Law Series vol 46, Wolters Kluwer 2021)

van Eechoud M and others, *Harmonizing European Copyright Law: The Challenges of Better Lawmaking* (Information Law Series 19, Kluwer Law International 2009)

Freno M, ‘Database Protection: Resolving the US Database Dilemma with an Eye toward International Protection’ (2001) 34 Cornell International Law Journal 165

Garrigues C, ‘Databases: a Subject-Matter for Copyright or for a Neighbouring Rights Regime?’ (1997) 19(1) EIPR 3

Geiger C, ‘The Missing Goal-Scorers in the Artificial Intelligence Team: Of Big Data, the Right to Research and the Failed Text-and-Data Mining Limitations in the CSDM Directive’ in Natalie Helberger and others (eds), *Intellectual Property and Sports: Essays in Honour of P Bernt Hugenholtz* (Information Law Series vol 46, Wolters Kluwer 2021)

Geiger C, Frosio G and Bubulayenko O, ‘Text and Data Mining: Articles 3 and 4 of the Directive 2019/790/EU’ in Saiz García C and Evangelio Llorca R (eds), *Propiedad intelectual y mercado único digital europeo* (Tirant lo Blanch 2019)

Geiger C and Izyumenko E, ‘From Internal to External Balancing, and Back? Copyright Limitations and Fundamental Rights in the Digital Environment’ in Julian Lopez and Conception Saiz Garcia (eds), *Digitalización, acceso a contenidos y propiedad intelectual* (Dykinson 2022) 103

Geiger C and Jütte B J, ‘Conceptualizing a “Right to Research” and Its Implications for Copyright Law: An International and European Perspective’ (2022) PIJIP/TLS Research Paper Series No 77

—— ‘Copyright as an Access Right: Concretizing Positive Obligations for Rightholders to Ensure the Exercise of User Rights’ (2024) 73 GRUR International 1019

Goldstein P and Hugenholtz P B, *International Copyright: Principles, Law, and Practice* (4th edn, Oxford University Press 2019)

Gordon W J, 'Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property' (1992) 17 U Dayton L Rev 853

Göğüş E, 'Veri Tabanlarına Sağlanan Hukuki Koruma' ['Legal Protection Granted to Databases'] (2024) (1) İbn Haldun Üniversitesi Hukuk Fakültesi Dergisi 91

Guibault L, *Copyright Limitations and Contracts: An Analysis of the Contractual Overridability of Limitations on Copyright* (PhD thesis, University of Amsterdam 2002) http://hdl.handle.net/11245/1.205006 accessed 12 January 2026

Guibault L, Westkamp G and Rieber-Mohn T, 'Study on the Implementation and Effect in Member States' Laws of Directive 2001/29/EC on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society' (2012) Amsterdam Law School Research Paper 2012-28

Gupta I, *Was Feist a Catalyst for the Structure of the Database Directive? A Legal Exploration of the Implications of the Feist Decision* (PhD thesis, Brunel University 2015)

Güçlütürk O G, 'ChatGPT ile Üretilen İçeriklerin Eser Niteliğinin 5846 Sayılı Fikir ve Sanat Eserleri Kanunu Bakımından Değerlendirilmesi' ['Assessment of the Work Status of Content Generated by ChatGPT under Law No 5846 on Intellectual and Artistic Works'] (2022) (2) Galatasaray Üniversitesi Hukuk Fakültesi Dergisi 1899

Güneş İ, 'Uygulamada Hususiyet İçeren Veri Tabanlarının Koruması ve Sui Generis Koruma' ['Protection of Databases Exhibiting Originality in Practice and Sui Generis Protection'] (2018) 13(142) Terazi Hukuk Dergisi 99

Gürpınar N, 'Veri Tabanlarının Fikrî Hak Olarak Korunması Hakkında Karar İncelemeleri' ['Case Analyses on the Protection of Databases as Intellectual Property Rights'] (2025) 99(2) İstanbul Barosu Dergisi 47

Hasan A A, 'Sweating in Europe: The European Database Directive' (2005) 9 Computer L Rev & Tech J 479

Hilty R M, ‘Intellectual Property and Private Ordering’ in Rochelle Dreyfuss and Justine Pila (eds), *The Oxford Handbook of Intellectual Property Law* (Oxford University Press 2018)

Hugenholtz P B, ‘Protection of Compilation of Facts in Germany and The Netherlands’ in E J Dommering and P B Hugenholtz (eds), *Protecting Works of Fact: Copyright, Freedom of Expression and Information Law* (Kluwer Law International 1991)

—— ‘Implementing the European Database Directive’ (2000) <https://www.ivir.nl/publicaties/download/PBH-HCJ-LIB.pdf> accessed 12 January 2026

—— ‘Abuse of Database Right: Sole-source Information Banks under the EU Database Directive’ <https://www.ivir.nl/publicaties/download/abuseofdatabaseright.pdf> accessed 12 January 2026

Hunsucker G M, ‘The European Database Directive: Regional Stepping Stone to an International Model?’ (1997) 7 Fordham Intell Prop Media & Ent LJ 697

Husovec M, ‘The End of (Meta) Search Engines in Europe?’ (2014) 14 Chi-Kent J Intell Prop 145

Jacques S, ‘On the Wax or Wane? The Influence of Fundamental Rights in Shaping Exceptions and Limitations’ in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021)

Jongsma D, ‘The Nature and Content of the Three-Step Test in EU Copyright Law: A Reappraisal’ in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021)

Kamperman Sanders A, ‘Data and Technology Transfer: Competition Law in the Fourth Industrial Revolution’ in Heath C, Kamperman Sanders A and Moerland A (eds), *Intellectual Property Law and the Fourth Industrial Revolution* (Kluwer Law International 2020)

Karnell G W G, 'The Nordic Catalogue Rule' in E J Dommering and P B Hugenholtz (eds), *Protecting Works of Fact: Copyright, Freedom of Expression and Information Law* (Kluwer Law International 1991)

Kaye L, ‘The Proposed EU Directive for the Legal Protection of Databases: A Cornerstone of the Information Society?’ (1995) 17(12) EIPR 583

Kendigelen A and Bozbel S, ‘Telif Hakları Açısından İnternette Veri Paylaşımı’ [‘P2P File Sharing and Copyright Law’], in Yeşim Atamer (ed), *Internet ve Hukuk* (Bilgi Üniversitesi Yayınları 2004)

Kerr I R, Maurushat A and Tacit C S, ‘Technological Protection Measures: Tilting at the Copyright Windmill’ (2003) 34:1 Ottawa Law Review 9

Kon S and Heide T, ‘BHB/William Hill – Europe’s Feist’ (2006) 28(1) EIPR 60

Koscik M and Matej M, ‘Database Authorship and Ownership of Sui Generis Database Rights in Data-Driven Research’ (2017) 31 Int’l Rev L Computers & Tech 43

Kurt K, ‘Bern Sözleşmesi ve Türkiye’nin Katılım Süreci’ [‘The Berne Convention and Turkey’s Accession Process’] (2021) 37(104) Atatürk Araştırma Merkezi Dergisi 1

Külahcı İ H, Elektronik Veri Tabanlarının Fikir ve Sanat Hukuku Kapsamında Korunması [Protection of Electronic Databases under Intellectual and Artistic Works Law] (Master’s thesis, Istanbul Sabahattin Zaim University, 2019)

Lessig L, Code and Other Laws of Cyberspace (Basic Books 1999)

Levin M, ‘The Cofemel Revolution – Originality, Equality and Neutrality’ in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021)

Manteghi M, ‘Overcoming Barriers to Text and Data Mining in the Era of ChatGPT: The Proposed Data Act as a Game-Changer’ (2024) 73 GRUR International 34

Margoni T and Kretschmer M, ‘A Deeper Look into the EU Text and Data Mining Exceptions: Harmonisation, Data Ownership, and the Future of Technology’ (2022) 71 GRUR International 685

Maurer S M, Hugenholtz P B and Onsrud H J, ‘Europe’s Database Experiment’ (2001) 294 Science 789

Mazumdar A, ‘Information, Copyright and the Future’ (2007) 29(5) *EIPR* 180

McManis C R, ‘Database Protection in the Digital Information Age’ (2001) 7 Roger Williams University Law Review 7

Metaxas G, ‘Protection of Databases: Quietly Steering in the Wrong Direction?’ (1990) 12(7) EIPR 227

Moscon V, ‘Data Access Rules, Copyright and Protection of Technological Protection Measures in the EU. A Wave of Propertisation of Information’ (2023) Max Planck Institute for Innovation & Competition Research Paper No 23-14 <https://ssrn.com/abstract=4515815> accessed 12 January 2026

Newell B C, ‘Discounting the Sweat of the Brow: Converging International Standards for Electronic Database Protection’ (2011) 15 Intell Prop L Bull 111

Nissinen P, *Database Protection in Light of the European Data Act and Servitisation* (Master’s thesis, University of Helsinki, October 2024)

Özkan Üner Z, ‘Ödünç Verme Hakkı ve Kamuya Ödünç Verme Lisansı Kapsamında E-Kitaplar’ [‘E-Books within the Scope of the Lending Right and Public Lending Licence’] (2017) 12 Terazi Hukuk Dergisi 32

Öztrak İ, ‘Fikir ve Sanat Eserleri Üzerindeki Hakların Korunması Yönünden Pozitif Hukuktaki Tarihi Gelişme’ [‘The Historical Development of Positive Law Regarding the Protection of Rights in Intellectual and Artistic Works’] (1970) 25(3) Ankara Üniversitesi SBF Dergisi

Powell M, ‘The European Union’s Database Directive: An International Antidote to the Side Effects of Feist?’ (1996) 20 Fordham Int’l L J 1215

Reichman J H, ‘Legal Hybrids between the Patent and Copyright Paradigms’ (1994) 94 Colum L Rev 2432

Reichman J H and Samuelson P, 'Intellectual Property Rights in Data?' (1997) 50 Vanderbilt L Rev 49 <https://scholarship.law.vanderbilt.edu/vlr/vol50/iss1/3> accessed 12 January 2026

Reichman J H and Uhlir P F, ‘Database Protection at the Crossroads: Recent Development and Their Impact on Science and Technology’ (1999) 14 Berkeley Tech LJ 793

Rosati E, ‘Is Text and Data Mining Synonymous with AI Training?’ (2024) 19 Journal of Intellectual Property Law & Practice 851

Sanders A K, ‘Data and Technology Transfer: Competition Law in the Fourth Industrial Revolution’ in Christopher Heath, Anselm Kamperman Sanders and Anke Moerland (eds), *Intellectual Property Law and the Fourth Industrial Revolution* (Kluwer Law International 2020)

Schneider M, ‘The European Union Database Directive’ (1998) 13 Berkeley Tech LJ 551

Sevi N E, *Fikri Mülkiyet Hukuku ve Haksız Rekabet Açısından Veri Tabanlarının Korunması* [Protection of Databases under Intellectual Property Law and Unfair Competition] (Master’s thesis, Dokuz Eylül University, 2005)

von Simson C, ‘Feist or Famine--American Database Copyright as an Economic Model for the European Union’ (1995) 20 Brook J Int'l L 729

Strowel A and Ducato R, ‘Artificial Intelligence and Text and Data Mining: A Copyright Carol’ in Eleonora Rosati (ed), *The Routledge Handbook of EU Copyright Law* (1st edn, Routledge 2021)

Suluk C, Karasu R and Nal T, *Fikri Mülkiyet Hukuku* [Intellectual Property Law] (Seçkin Yayıncılık, 2019)

Şaar C, ‘Eser Sahipliğinde Gerçek Kişi Olma Şartının Yerindeliği Üzerine Bir İnceleme: Tüzel Kişiler Eser Sahibi Olabilir Mi?’ [‘On the Requirement of Natural Personhood in Copyright Ownership: Can Legal Persons Be Authors?’] (2025) 10(2) İstanbul Aydın Üniversitesi Hukuk Fakültesi Dergisi 191

Şener Y S, Fikri Mülkiyet Hukukunda Dijital Veri Tabanlarının Korunması [Protection of Digital Databases in Intellectual Property Law] (PhD thesis, Istanbul Kültür University, 2013)

Tekinalp Ü, ‘Derleme Eser, Düşünce Yaratıcılığı ve Bunun “Hususiyet” Üzerindeki Etkisi’ [‘Compilations, Criterion of Intellectual Creativity and Its Effects on the Criterion of "Peculiarity of Works"’] (2005) (1) Ankara Barosu Fikri Mülkiyet ve Rekabet Hukuku Dergisi 69

—— *Fikrî Mülkiyet Hukuku* (5th edn, Vedat Kitapçılık 2012)

Üstün G, 'Türkiye'de Fikir ve Sanat Eserleri Yasası'ndaki Son Gelişmeler' ['Recent Developments in Turkey's Law on Intellectual and Artistic Works'] (1996) 4(1–2) Marmara Üniversitesi Avrupa Araştırmaları Dergisi 101

Wu X (J), 'E.C. Database Directive' (2002) 17(1) Berkeley Tech LJ 571

Xiao G, 'Data Misappropriation: A Trade Secret Cause of Action for Data Scraping and a New Paradigm for Database Protection' (2022) 24 Colum Sci & Tech L Rev 125

Reports and Other Sources

Commission of the European Communities, 'Green Paper on Copyright and the Challenge of Technology - Copyright Issues Requiring Immediate Action' COM (88) 172 final

Commission of the European Communities, 'Proposal for a Council Directive on the Legal Protection of Databases' COM(92) 24 final

Commission of the European Communities, '2002 Regular Report on Turkey's Progress towards Accession' SEC(2002) 1412

Commission of the European Communities, '2003 Regular Report on Turkey's Progress towards Accession' SEC(2003) 1212 final

Commission of the European Communities, 'First Evaluation of Directive 96/9/EC on the Legal Protection of Databases' (DG Internal Market and Services Working Paper, 12 December 2005) <https://openfuture.eu/wp-content/uploads/2021/12/2019EC-evaluation_report_legal_protection_databases_december_2005_en.pdf> accessed on 12 January 2026

Commission, 'A European Strategy for Data' COM(2020) 66 final

European Copyright Society, 'Copyright and Generative AI: Opinion of the European Copyright Society' (ECS Opinion, January 2025) <https://europeancopyrightsociety.org/wp-content/uploads/2025/02/ecs_opinion_genai_january2025.pdf> accessed 12 January 2026.

LIBER Europe, ‘Europe’s TDM Exception for Research: Will It Be Undermined By Technical Blocking From Publishers?’ (LIBER Europe, 10 March 2020) <https://libereurope.eu/article/tdm-technical-protection-measures/> accessed 12 January 2026

Lucchi N, ‘Generative AI and Copyright - Training, Creation, Regulation’ (Study PE 774.095, European Parliament 2025) <https://www.europarl.europa.eu/thinktank/en/document/IUST_STU(2025)774095> accessed 12 January 2026

Table of Cases

European Union

Cofemel — Sociedade de Vestuário SA v G-Star Raw CV (Cofemel) (Case C-683/17) EU:C:2019:721

Compass-Datenbank GmbH v Republik Österreich Case (C-138/11) EU:C:2012:449

Directmedia Publishing GmbH v Albert-Ludwigs-Universität Freiburg Case (C-304/07) EU:C:2008:552

Eva-Maria Painer v Standard VerlagsGmbH and Others (Case C-145/10) EU:C:2011:798

Fixtures Marketing Ltd v Organismos Prognostikon Agonon Podosfairou AE (OPAP) (Case C-444/02) EU:C:2004:697

Fixtures Marketing Ltd v Oy Veikkaus Ab (Case C-46/02) EU:C:2004:694

Fixtures Marketing Ltd v Svenska Spel AB (Case C-338/02) EU:C:2004:696

Football Dataco Ltd and Others v Yahoo! UK Ltd and Others (Case C-604/10) EU:C:2012:115

Funke Medien NRW GmbH v Bundesrepublik Deutschland (Case C-469/17) EU:C:2019:623

Infopaq International A/S v Danske Dagblades Forening (Case C-5/08) EU:C:2009:465

Innoweb BV v Wegener ICT Media BV and Wegener Mediaventions BV (Case C-202/12) EU:C:2013:850

Nintendo Co Ltd and Others v PC Box Srl and 9Net Srl (Case C-355/12) EU:C:2014:25

SI and Brompton Bicycle Ltd v Chedech / Get2Get (Case C-833/18) EU:C:2020:461

SIA "CV-Online Latvia" v SIA "Melons" (Case C-762/19) EU:C:2021:434

The British Horseracing Board Ltd and Others v William Hill Organization Ltd (Case C-203/02) EU:C:2004:695

Türkiye (Yargıtay - Court of Cassation)

Yargıtay [Court of Cassation], Assembly of Civil Chambers, 14 October 2021, 2017/2758 E., 2021/1228 K.

Yargıtay [Court of Cassation], 11th Civil Chamber, 13 April 2006, 2005/3506 E., 2006/4425 K.

Yargıtay [Court of Cassation], 11th Civil Chamber, 14 February 2012, 2010/9679 E., 2012/1890 K.

Yargıtay [Court of Cassation], 11th Civil Chamber, 12 June 2017, 2017/2028 E., 2017/3587 K.

Yargıtay [Court of Cassation], 11th Civil Chamber, 13 April 2022, 2020/5940 E., 2022/2992 K.

Other

Hoge Raad der Nederlanden [HR] [Supreme Court of the Netherlands], *Romme/Van Dale Lexicografie*, 4 January 1991 ECLI:NL:HR:1991:ZC0104

Feist Publications, Inc v Rural Telephone Service Co 499 US 340 (1991)