

Special Issue

**DATABASE
REGULATION:
EXAMINING EXISTING
APPROACHES AND
CONSIDERATIONS
FOR INDIA**

FEBRUARY 2021 |
ISSUE NO. 205

ABOUT THE AUTHOR

Aishwarya Giridhar is a Fellow at the Esysa Centre.

ACKNOWLEDGEMENTS

The author would like to thank all the people who assisted in drafting this brief and is particularly grateful to Sidharth Deb for his inputs. All views expressed here, as well as errors therein, are the authors' alone.

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OVERVIEW

Regulators around the world are scrutinising tech companies—the US, EU, India and other jurisdictions are filing competition lawsuits against large digital platforms, and the EU as part of its digital data strategy recently released drafts of the Digital Services Act, Digital Markets Act, and Data Governance Act on competition, content moderation, platform liability, and other aspects of digital technology.¹ In India the government recently released draft frameworks for non-personal data regulation (the NPD Report)² while a Joint Select Committee in Parliament is deliberating on the draft Personal Data Protection Bill,³ and the government indicates interest in a focus on developing artificial intelligence and related technologies.⁴

Data is at the core of how digital platforms provide the products and services we use today, and is central to their functioning. It also has wider implications, and the transition from a paper-based system to a digital one offers multiple advantages not always related to technology: permitting better management of information, increasing security and efficiency, and providing information and insights to enable better decision making.⁵ Data is also being used at an unprecedented scale, in public service delivery, finance, healthcare, transportation, and marketing.⁶ A variety of stakeholders are collecting increasing volumes of data, whether personal, non-personal or a combination of the two.

Yet vast amounts of data are not useful in themselves without ways to make sense of them. This is what many emerging technologies do, from machine learning to the wide range of tools named ‘artificial intelligence’—they are methods to analyse and derive value from large volumes of data, and in many cases the way they work improves when given more diverse data to analyse. It is only possible to do so by ordering and organising data into specific formats depending on the intended use: this is the role of a database.

This paper examines how databases are afforded protection and details some key considerations for database regulation in India. It explores database protections in other jurisdictions, primarily the European Union and the United States. Section 1 defines a database, 2 explores the protections afforded by copyright law, 3 examines sui generis or standalone database protections, 4 explores protection by unfair competition laws, 5 examines the protections prevailing in India, and 6 lists emerging considerations and policy recommendations.

1/ WHAT IS A DATABASE?

This section describes a database, identifies key players in the data ecosystem, and lists ways in which databases are used.

At a very basic level, a database is a collection or compilation of records (that is, data) organised for easy access and retrieval.⁷ Depending on the intended use a database may range from consisting simply of information stored on spreadsheets or documents, to containing vast amounts of information that must be organised in database management systems which require programming languages to access and manage the data.⁸ Databases can comprise multiple elements: raw data, which are the individual pieces of data contained in the database, and the programs and tools used to communicate, store or manipulate the raw data.⁹ Databases can also be derived from one or more pre-existing databases, and can contain a mix of extracted as well as original data.¹⁰

Who collects data, and how are databases used?

Traditionally, governments have been the largest collectors of data and they continue to collect significant amounts of information today. This can be for a range of purposes, such as administrative services (drivers' licences, property related services), social security benefits (pension, insurance), policy framing, urban planning, assisting law enforcement efforts, etc. Private companies are now increasingly relying on data for their businesses, and databases are central to how many operate, even those providing traditional services such as banking and finance. For instance, big data analysis¹¹ can be useful in the financial sector for risk management, personalised consumer marketing, detecting fraud and illegal trading, and providing new services to customers.¹²

Advertising is also a significant reason to collect data, and is at the heart of how the Internet operates today. Most 'free' online services are funded through

advertising, which has meant that most platforms offering digital services collect information on user preferences and behaviour. Aggregators, or platforms that collect information from different sources to provide services, are central to this ecosystem. Google and Facebook are the most significant aggregators and collect the largest share of revenue from online ads today.¹³ They connect advertisers to users in a way that theoretically benefits everyone involved: advertisers use insights from the user data collected by these platforms to target those who are most likely to be receptive to their products; users see more relevant advertisements; and the platforms charge advertisers for displaying their ads. While the system is much more complicated in practice,¹⁴ digital advertising is a significant reason for data collection and a key area in which companies deploy digital technologies. Data can also help small businesses and sellers of niche products and services to find their consumers (especially through social media)¹⁵ and help companies improve their products and services based on a variety of inputs including consumer preference.¹⁶

Databases are essential to managing the vast volume of information so collected, and are prerequisite to all 'artificial intelligence' technologies, such as those relying on predictive analysis and deep learning.¹⁷ An increasing number of companies base their business models on such technologies, and databases are essential for their business decisions (especially when they rely on tools such as predictive analysis).¹⁸ Significantly, the quality of datasets used to train such technologies determines how effective they will be. Developing diverse and comprehensive datasets is essential to developing reliable tools of artificial intelligence.¹⁹

Such technologies are also valuable to conducting research, on how to order and locate existing information and undertake new analyses. Access to scientific, technical, and other forms of data is essential to public interest endeavours such as not-for-profit research, education, and public library systems.²⁰

Who are the key players in this ecosystem?

Governments and private companies that collect and use data as described above are some key players – and wherever data is collected from individuals, they are important stakeholders as well. In database creation and management, the lines can be more blurred. Some companies undertake much of the creation and management of databases by themselves: they would for example collect data, create databases and the programs necessary to manage them, and use these to develop and refine their products and services. Other companies and data collectors (such as governments) may want to utilise the databases but lack the tools to manage them. In such a situation they may rely on database management services provided by companies such as Microsoft and Amazon, which host and provide basic database management tools. Or companies may use such services, and also have in-house teams creating tools to make use of the database to develop or refine their products. There are also companies for whom a database is the service they make available to users, especially in the research and educational context, such as LexisNexis and JSTOR.

How are databases regulated?

Databases can be quite valuable in a variety of contexts and understanding the different players in this ecosystem will make it easier to frame more nuanced and targeted regulation. Currently, different jurisdictions protect databases using different laws, and the rationale for affording databases legal protection generally rests on two factors. One is to protect the intellectual labour invested in them, usually through copyright law; the second is to protect investments of time and value in a database, even if there has been no intellectual input.

The latter investment can be protected by standalone (*sui generis*) database rights, or by laws against misappropriation. A database can also be protected by contract, trade secret, or breach of confidence laws. Governments and regulators are increasingly exploring options that may require a company to provide limited access to its databases to address competition and related concerns. We shall see below how each kind of protection can have many implications for various rights. The database protections offered by copyright laws are explored next.

2/ COPYRIGHT

This section analyses the copyright protection offered to databases under international instruments and Indian law

Databases were originally protected by copyright law and this protection is codified in international copyright instruments as well. The Berne Convention includes ‘collections of literary and artistic work such as encyclopaedias and anthologies which by reason of the selection and arrangement of their contents, constitute intellectual creations’²¹ —providing database creators with some exclusive rights and recognising that the selection and arrangement of the contents constitute intellectual creation. The TRIPS Agreement expands the definition of compilations, to include data and other material in machine-readable or other forms.²² The WIPO Copyright Treaty, the most recent instrument aimed at updating copyright norms, defines ‘compilations of data’ or databases similarly to TRIPS.²³ All these instruments require databases to contain some level of creativity to be eligible for copyright protection. Importantly, they all recognise that such copyright protection does not extend to the contents of a database themselves. Such data may have separate copyrights, or may not be copyrightable at all.

Copyright protection in India

Databases can be protected as literary works under the Copyright Act of 1957 (Copyright Act). While databases are not defined in the Act, a literary work has been defined to include ‘computer programmes, tables and compilations including computer databases’.²⁴ Copyright would include, among other protections, the right to reproduce databases, issue copies to the public, make translations or adaptations, and offer them for sale or rent.²⁵ It would only be available to databases with some originality, and would only apply to the arrangement of a database and not its contents. But it can be tricky to apply this standard to digital databases and technologies, as discussed below.

Standard of originality – The standard of originality required for protection under the Copyright Act is based on judicial interpretation that has shifted over the years. Earlier decisions relied primarily on jurisprudence developed in the United Kingdom, which used a ‘sweat of the brow’ standard for copyrightability: that is, copyright protection was based on the labour invested by the creator of the relevant work, and unauthorised use of such work would amount to infringement.²⁶ Using information from a compilation to create another directory, for example, would be considered infringement, unless the information were collected independently.²⁷ The rationale in such cases was to prevent others from benefiting from a work someone had laboured to create.²⁸ Copyright was therefore used as a tool to prevent misappropriation of labour, rather than to protect intellectual creations and contribute to the public domain.²⁹

‘Sweat of the brow’ can be a problematic standard for protecting databases since the limited monopoly afforded by copyright is meant to incentivise knowledge creation. Offering protection to compilations of fact would severely impact access to information, which is also a core concern of copyright law. Copyright specifically does not protect ideas or facts, and any standard that restricts access to them would be contrary to its purpose. There are other ways to protect economic rights, such as contracts, competition law, the breach of confidence doctrine, and laws against misappropriation.

The Supreme Court of India in 2004 affirmed the ‘modicum of creativity’ standard for a database to qualify for copyright protection. This standard was first laid down in the context of databases by the Supreme Court of the United States,³⁰ and required databases and compilations to have some degree of creativity in the selection, arrangement, or other treatment of the information contained.³¹ Merely arranging names

alphabetically in a telephone directory, for example, would not satisfy the standard. Rather than having compilers invent new ways of arrangement to claim protection, the author would only have to make the arrangement independently (that is, without copying it from another work) using a minimum level of creativity.³²

This standard was affirmed by the Supreme Court of India in *Eastern Book Company v. DB Modak* in which it also rejected the ‘sweat of the brow’ standard. The court clarified that for copyrightability, the contents of a database would not need to be original nor the arrangement be considered novel. It would require only that original skill or labour was expended in how the database is constituted or arranged.³³ By this standard, non-original databases such as maps, lists of cases, anthologies of publications and the like are not copyrightable. But non-original databases can be useful, and require substantial investments of time, money, and labour to create and maintain. There were concerns that such databases had not been adequately protected, which led to a push to recognise standalone database rights at an international level, as explored in Section 3 below. Such databases may also be protected in other ways under Indian law, as discussed in Section 5.

Text and Data Mining

A related concept and important tool for stakeholders, especially researchers and scientists, for accessing and analysing information available online is text and data mining or TDM. TDM is the process of digitally analysing vast amounts of information to discover patterns, trends, and other useful information on a scale that would not be possible for humans without a computer.³⁴ TDM can be used to scan medical journals, for instance, to discover new links between drugs and symptoms that could serve as the basis of further research. It is also being used to create the datasets used to train AI and related algorithms. The

information analysed may be obtained from publicly available sources or from copyrighted material, and can be used by for-profit entities as well. This has led to some challenges in the copyright regime, primarily relating to the exclusive right of copyright holders over the reproduction of protected works. Most TDM methods require the extraction and/or reproduction of the work being mined, which would impinge on rightsholders’ reproduction rights.

As a result, legislators have tried to clarify the extent to which TDM is permitted by copyright law. Japan was the first country to amend its copyright legislation to specifically permit TDM for increasing innovation. It allows all users to analyse and understand copyrighted works for machine learning, based on the understanding that rightsholders are not harmed when users can only access the information underlying a work, and cannot see copyrighted expressions of such work.³⁵ It also allows for incidental storage of electronic copies of works, and the use of copyrighted works for verification when conducting research. This is necessary to verify the results of insights and information obtained through TDM.³⁶ Singapore is considering a proposed amendment that would permit non-profit and commercial exceptions for TDM, in cases where users have lawful access to the works.³⁷ The EU’s Directive on Copyright in the Digital Single Market (DSM Directive) grants exceptions for TDM in some cases. It allows TDM by ‘research organisations’ and ‘cultural heritage institutions’ for non-profit activities, for works to which the organisations have lawful access. Rightsholders cannot contractually opt out of such use.³⁸ There is also a narrower exception for TDM by commercial organisations, but rightsholders can opt out of such use.³⁹

In India, the Copyright Act does not specifically provide for TDM, although some uses would be covered under the larger fair dealing exception. The specific actions permitted would depend on the facts of each case, and amendments to clarify the scope of permissible TDM use would be beneficial.

3/ STANDALONE DATABASE PROTECTION

This section describes the rationale for providing non-original databases with standalone or sui generis protection. It explores international developments and the performance of the Database Directive, which prescribes rights over non-original databases in the European Union

The EU's Database Directive was one of the first regulations to prescribe specific standalone rights for non-original databases. This section describes the international debate over this kind of database protection, and analyses the Database Directive.

WIPO and an International Database Treaty

Beginning in 1994 there was a push to recognise and provide rights to non-original databases at the World Intellectual Property Organisation.⁴⁰ The push for a sui generis or standalone database right came primarily from the EU, which was developing its Directive 96/9/EC (Database Directive) at the time. The USA, which was contemplating similar legislation, also provided some support. The key reasons provided at the time for protecting non-original databases were:⁴¹

- a. The production and distribution of databases was becoming more widespread. It could be seen as a 'content industry' within the information industry and a source of new industries and employment;
- b. Producing and distributing databases required substantial investment, while emerging technologies for digital recording meant that unauthorised copies of a database or essential parts could be made at practically no cost and be used to compete with the original database;
- c. Existing copyright protection was insufficient because databases could be valuable and still not meet the originality thresholds needed to qualify for copyright protection—it was thought the proposed protection would encourage investment in developing and refining such databases.

Developing countries including India objected to the need for this right. Although the matter remained on the agenda of WIPO's Standing Committee on Copyright and Related Rights and a draft of the proposed legislation (Proposed Treaty) was placed before it, it was finally removed in 2005 after increasing opposition.⁴² While there was general agreement among WIPO member states that databases needed protection, they disagreed whether existing frameworks would suffice or a separate right was necessary. India and other states, especially those with developing economies objected to the Proposed Treaty for several reasons:⁴³

- a. There was no real evidence of a lack of adequate protection, or evidence of any real market failure that needed to be addressed. Many developing countries thought the push for such a treaty was premature and wanted consultations with domestic stakeholder groups before implementing such a right;
- b. The proposed protections were seen as erecting barriers to information access, and it was thought that copyright protection already provided adequate incentives to invest in the area. Developing countries laid stress on the need to promote education, scientific research, and cultural studies, and were wary of barriers to access in these areas;
- c. Scientific research communities expressed significant concerns that such protection would create information monopolies for single-source databases. The data in such a case would arise from one source (such as a sporting event), and it was thought the creators of such databases may potentially monopolise the downstream market in derivative information products or services.

The Database Directive introduced in 1996 by the EU contained provisions similar to the Proposed Treaty. It was effective and operational over the course of deliberations at WIPO and therefore provides a

useful metric to study the performance of standalone database protection. The specifics and performance of the Database Directive are studied below.

The EU Database Directive was based on the 'catalogue right' afforded in Nordic jurisdictions, which offered short-term protection to compilations ineligible for copyright protection.⁴⁴ The Directive defines a database 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.'⁴⁵ While a collection will have to be arranged and accessible to be considered a database, it is nevertheless quite broad and may even consist of 'materials' such as sound recordings, non-original photographs, and other products protected by neighbouring rights.⁴⁶ It gives database makers the right to prevent others from extracting (transferring to another medium) or reutilising (making available to the public) the whole or a substantial part of the contents of a protected database. The right is provided if there has been substantial investment (evaluated quantitatively or qualitatively) in obtaining, verifying, and presenting the contents.⁴⁷

Databases can potentially be protected in perpetuity under the Database Directive, since the initial 15 year protection is renewable each time there is a substantial change resulting in a 'substantial investment' in the database.⁴⁸ Even 'substantial verification of the contents of the database' would count as substantial investment and extend the term of protection.⁴⁹ Exceptions in the Directive are more restrictive than in copyright law, preventing any use that conflicts with normal exploitation of the database, or prejudices the 'legitimate interest' of the database creator.⁵⁰ There are also very limited exceptions for non-electronic databases for private use, for teaching and scientific research in some contexts, for public security, or administrative or judicial procedures.⁵¹

Scope of rights under the Database Directive

An issue with the Directive is that the scope of rights it affords is unclear: terms such as 'substantial investment evaluated qualitatively or quantitatively', 'extraction', and 'normal exploitation'⁵² are not defined, and do not have established interpretations in copyright law.⁵³ This has left the scope of the law to judicial interpretation over the years. Although the rights provided under the Database Directive are quite broad, judicial decisions have since narrowed the scope in some contexts.

A key domain in which this has occurred is 'spinoff' databases, which are generated as the by-products of services offered by the database makers. These could include program listings, travel schedules, stock exchange data, etc. At the core of these cases is the meaning of 'substantial investment' as used in the Directive. In 2004 the European Court of Justice clarified that investment in 'creating' data, that is, in creating the contents of the database, would not be considered in assessing investment in the creation of the database itself and would not receive protection.⁵⁴ This interpretation reduces the likelihood of monopolies over such databases, and narrows the scope of protection from the broader reading of the term 'substantial investment' as used in the Database Directive.

There are still unanswered questions, however—for instance, how would monopolies over single source databases that are not spinoffs be managed? This is especially important in the research context, where the database rights of large scientific publishers could significantly stifle access to information, one of the main criticisms of the Directive. Other key criticisms include:

- a. Potentially perpetual term of protection. There are concerns that the Directive provides database makers with exclusive property rights for a virtually unlimited duration, to the detriment of access to information in the public domain.⁵⁵

- b. Competition and monopoly concerns. There were concerns it might create mini-monopolies of information, creating barriers to research and stifling competition especially in downstream markets. Although competition concerns were allayed to a certain extent by judicial decisions at the European Commission, critics observed that relying on courts or competition authorities instead of addressing the issue in the Directive was a problem. Indeed, earlier drafts of the Directive contained a provision requiring the makers of single-source databases to license their access and use on fair and non-discriminatory terms in some contexts, but this provision was deleted in later drafts.⁵⁶
- c. Narrow exceptions. The property rights provided under the Directive are quite vast, with very narrow exceptions. This has led to a situation where raw data or information not protected under intellectual property laws could receive among the strongest IP protections in this regime.
- d. Eroding the dichotomy between idea and expression. The idea/expression dichotomy in copyright law prevents downstream monopolies by restricting copyright to original expression. This conception leaves the data, ideas, and other descriptive aspects of the work in the public domain, which can then be used for innovation or research.⁵⁷ Although the Directive specifies that data is not protected under sui generis right,⁵⁸ in practice it is hard to distinguish unprotected individual data from protected data aggregates.⁵⁹

Evaluation of the Database Directive

The Database Directive requires a report to be submitted periodically to examine applications of the sui generis right and whether it has led to abuse of dominant position or interference with free competition. The Directive has been reviewed twice, first in 2005 and again in the context of the EU's

Digital Single Market initiative in 2018.⁶⁰ The first review was largely ambivalent about the Directive's efficacy—for instance it found that the economic benefit of the sui generis right was unproven, casting doubts on the necessity for such regulation.⁶¹ Additionally, while one of the Directive's main objectives was to formulate uniform legal standards across the EU, the evaluation noted divergent judgments on the interpretation of terms such as 'substantial investment', and whether hyperlinking or deep-linking to articles on a search engine constituted infringement.⁶² It noted critics' concerns about impaired access to information, and arguments that the sui generis right comes very close to protecting information as property, which is antithetical to copyright law.⁶³ It outlined four policy options, ranging from repealing the Directive altogether to maintaining the status quo and retaining it as it was.⁶⁴

The second evaluation in 2018 reinforced some of these findings but differed on key concerns. It found for example that the Directive did not have any proven impact on database production or the competitiveness of the database industry in the EU. It also found however that the limited scope of protection offered by judicial decisions struck an appropriate balance between the rights of users and database makers. It noted that decisions suggesting that spinoff databases would not be protected under the Directive meant that protection would not generally apply to the data economy, which includes machine generated data, Internet of Things devices, big data, AI, etc. Instead, it would cover only databases containing information obtained from external sources: as with publishers for example, who specifically seek out data to commercialise their databases. It found that there was no need to amend the Directive significantly.⁶⁵

The EU's own reviews of the Database Directive seem to suggest that its original objectives had not been met. They highlight some emerging debates (such as on machine generated data) and the importance

of well-defined terms and balanced protection. Despite ongoing criticism of the Directive and the controversy around sui generis protection, many countries have adopted domestic database rights legislation primarily as part of trade agreements signed with the EU.⁶⁶ The Directive denies protection to databases created outside the EU unless the country of origin offers 'comparable protection' to databases created by EU nationals or residents. There have been periodic pushes in the US to institute a similar right, but these efforts have been unsuccessful. Databases there are primarily protected by unfair competition laws, as discussed below.

4/ PROTECTION UNDER UNFAIR COMPETITION LAWS

This section explores database protection under the tort of misappropriation (which is part of the jurisprudence on unfair competition) primarily in the United States

The remedy provided by unfair competition law is usually in the context of the tort of misappropriation, and is used to prevent competitors from freeriding on the efforts of database makers. The landmark case in this regard was decided in 1918, when the US Supreme Court held that the International News Service could not copy war-related news items sourced by the Associated Press at great trouble and expense.⁶⁷ Courts have since relied on the decision to fashion similar reliefs, but the scope of the doctrine remains unclear, with different courts applying it in different circumstances.⁶⁸ The scope of remedy was narrowed in 1997, when the Second Circuit of the Court of Appeals deemed that misappropriation would apply to databases only in the following circumstances:

- a. a plaintiff generates or gathers information at a cost;
- b. the information is time-sensitive;
- c. a defendant's use of the information constitutes freeriding on the plaintiff's efforts;
- d. the defendant is in direct competition with a product or service offered by the plaintiff; and
- e. the ability of other parties to freeride on the efforts of the plaintiff or others would reduce the incentive to produce the product or service such that its existence or quality would be substantially threatened.⁶⁹

Proponents of stronger protection say the standard is onerous to meet and offers insufficient protection. They also express concern about the non-uniform application of this tort by different courts, leaving the boundaries of protection unclear.⁷⁰ Supporters of the misappropriation doctrine argue that it provides strong remedies to conduct likely to lead to commercial harm, while avoiding adverse effects on access to information in the public interest.⁷¹

Other jurisdictions use equivalent doctrines to protect databases as well, under the umbrella of unfair competition.⁷² Earlier drafts of the EU Database Directive were in fact premised on unfair competition, with the sui generis right being intended to prevent unfair extraction from databases for a commercial purpose.⁷³ The Directive was meant to harmonise the standard of protection available across the EU. Although significantly amended thereafter, the Directive specifies that it will operate without prejudice to unfair competition laws.⁷⁴ This may include factors such as regulation of advertising, marketing, misappropriation, exploitation, reputation, imitation, and general impediments to competitors.⁷⁵ Accordingly, the Directive operates in consonance with judicial decisions in each EU member state, with some interpreting the unfair competition doctrine more broadly than others.

5/ THE INDIAN SCENARIO

This section describes the ways in which databases are protected under Indian law

In India, databases can be protected in multiple ways: by the Copyright Act as described in Section 2 above, as trade secrets or under the breach of confidence doctrine, under contract law (through clauses on confidentiality) and under the Information Technology Act of 2000 (IT Act). Certain clauses of the Personal Data Protection Bill of 2019 (PDP Bill) would also apply to databases that contain personal information.⁷⁶ Protections offered under these frameworks are briefly explored below.

Trade secrets, breach of confidence, and contracts

Indian law does not specifically protect ‘non-creative’ databases, but they can be protected under trade secrets jurisprudence. While India does not have a separate law on trade secrets, confidential information can be protected under contract and the equitable doctrine of breach of confidence. While contractual protections would only apply to parties to the agreement, the equitable doctrine of breach of confidence would apply even in the absence of a contract, where there is an implied duty of confidentiality, and information has been provided in confidence to another.⁷⁷ The obligation to maintain confidentiality would extend to anyone else who receives the information originally given in confidence, where they know, either when they receive the information, or subsequently find out that it was originally given in confidence.⁷⁸ Remedies in these avenues can range from damages to injunctions, and orders for specific performance and disgorgement of profits, depending on the relevant facts.⁷⁹ None of the provisions incentivise database owners to share information, and the scope of protection is unclear as they are not protected under statute.

Case law conflicts on whether the underlying information would be protected as a trade secret. Most cases relating to confidential information or trade secrets were litigated in the context of an employer-employee relationship. Judgments have held that employees cannot utilise confidential agreements, reports, client lists, or other materials to which they gained access during their employment.⁸⁰ There are also cases to suggest that information generally known and understood in the relevant industry, such as advertisement rates, cannot be considered a trade secret.⁸¹ What is central to trade secret protection is that the relevant information be kept secret: trade secrets disclosed publicly, or not adequately protected, or reverse engineered would lose protection.⁸² Additionally, no one can be prevented from developing or discovering a trade secret on their own, and the protection has no time limit as long as the information is kept secret.

The protections offered by trade secret law were examined in some detail by the NPD Report in the context of access to data. Emphasising the difficulty in identifying information that constitutes a trade secret, it concluded that ‘raw public non-personal data’ would not fall in its ambit, and that protection is unlikely to prevent eminent domain over information considered a trade secret.⁸³ Given the ambiguity in case law on what qualifies for trade secret protection, and the fact that disclosure would remove protections, it is not clear that mandating disclosure would not contradict existing law. This ambiguity shows the need for legislative protection of trade secrets so these boundaries are clearly defined, but an analysis of trade secret legislation is outside the scope of this paper.

The IT Act

The IT Act defines databases in a specific context, in section 43 which provides for the payment of damages for a set of unauthorised actions relating to computers, computer systems, and computer networks. This includes downloading, copying, or extracting data, computer databases, and information from computer systems.⁸⁴ It defines a 'computer database' quite broadly, as 'a representation of information, knowledge, facts, concepts or instructions in text, image, audio, video that are being prepared or have been prepared in a formalised manner or have been produced by a computer, computer system or computer network and are intended for use in a computer, computer system or computer network' (emphasis added).

Section 43 only requires that access to the computer, computer system, or computer network was unauthorised, and therefore appears to be linked to the jurisprudence on breach of confidence discussed above. It would seem also to apply regardless of how much of the database was accessed or copied, and apply to the data contained within the databases.⁶⁶ Similarly, other provisions in the Act on confidentiality and unauthorised access or disclosure of information can also be applied to databases.⁸⁵

Currently, the IT Act provides limited protection for personal data: section 43A requires 'body corporates' to compensate a person for breaching her sensitive personal information in case they were negligent in maintaining reasonable security practices and procedures and consequently caused wrongful loss or gain to the person.⁸⁶

In India we have a set of disaggregated laws that could apply to databases. While parties can protect their databases, to rely primarily on trade secret or contract law to protect unoriginal databases poses some problems. These frameworks disincentivise data sharing, since disclosing information would remove legal protections. The lack of legislation in this regard can also make it more difficult for parties to enforce their rights, and to understand the rights that are available.

6/ EMERGING CONSIDERATIONS - RECOMMENDATIONS

Databases are being developed and used in many ways unaccounted for by existing case law and legislation. Although the core issue remains, of striking a balance between economic protection and limiting monopolistic behaviour, the ways in which technology is developing have blurred some lines and given rise to new considerations. For example, while databases are still being created for profit, they are also widely developed by companies for in-house use. Distinctions between the various uses of such databases can be difficult to make, especially when a company offers services in several markets or domains.⁸⁷ Depending on the contents of a database and the ways in which it is used, such distinctions may also have implications for rights such as privacy and free expression, and effects on intellectual property and competition.

As the foregoing review shows, some of the main methods of protection used in various jurisdictions—contract law, technological protection, trade secrets jurisprudence—incite the restriction of access to such databases, without providing avenues to allow access in certain contexts. The lack of a separate legal framework for non-original databases could therefore play a role in restricting access to information.⁸⁸ The specifics and levels of protection offered to databases vary across jurisdictions, and the interplay of the different types of protection can be complex.

There is also a growing trend of regulators around the world scrutinising the so called Big Tech companies, which have significant market share in their areas of business. Competition regulators in various jurisdictions are considering mandatory data sharing to address competition concerns. For instance, the EU, after heavily fining tech companies for anti-competitive behaviour, has now released draft legislation that would require such businesses to share some data with smaller rivals in certain contexts. The proposed Digital Markets Act provides for data sharing to ensure competition, and the proposed Data Governance Act specifically regulates access to data.

These proposals are part of the EU's Data Strategy in its 2020 European Strategy for Data.⁸⁹

In the UK, the competition regulator is pushing for a new regulatory regime for online platforms. Such a regime would have the power to, among other measures, break up some such platforms.⁹⁰ These steps are an attempt to introduce real change in how these companies operate, which the levying of significant fines in Europe has failed to do. In India, the NPD Report which considers a regulatory framework for non-personal data, also requires companies to share datasets in some contexts.⁹¹ In India, however, it is important first to clarify what framework would apply to databases before such measures are taken, and issues of access may be best regulated in such a framework.

Database legislation

Formulating a separate legislative framework for databases could be an effective way to address the issues described above. For example, there is no clarity on the scope of protection offered to non-original databases, nor contemplation of how public and private interests should be balanced, especially in the Indian context. Such a balance would be better achieved through carefully defined legal rights rather than private contracts or trade secret law.⁹² It would be useful to consider a new legislative framework that clarifies the scope of available protection, setting out well defined modes of access for research and similar use. Adopting a sui generis framework akin to the Database Directive would have limited value in India where there is no demonstrable need for expanded protections. Nor do reviews of the Directive suggest that its aim of incentivising database creation has been achieved, especially as there are other methods of database protection as described in this paper. A system of protection based on unfair competition or misappropriation, and not proprietary ownership, could be more suited to non-original databases since

the primary concern would be to prevent competitors unfairly benefiting from the effort and investment of database creators.

Such a framework would first require an evaluation of the kinds of data and datasets valued by various stakeholders. This would require increasing transparency in the private and public sectors, with disclosures of the kinds of data collected and their uses being the first step in framing effective regulation. It would also enable research to understand the value of different forms of data to stakeholders, which may help identify ways to differentiate between various kinds of datasets.

Uniform, one size fits all regulation would lead to overbroad provisions. Targeted regulation can involve differentiation in a few ways. One could be to classify the different types of databases in order to provide appropriate regulation based on the use, subject matter, where the data was collected from, or other factors. Any framework would also need to consider and clarify interactions with the Copyright Act, where it may consider a tiered system of regulation based on the contents of the database, levels of intellectual or economic investment, proposed use, the nature of the database makers, or any other relevant factors. This would create targeted regulation, providing clarity on the protections offered and the scope of permitted use (for research and education, etc). Differentiating between various types of database creators would also permit more targeted regulation: for example, there could be open access to databases created by public institutions. It could also clarify how to treat databases not created solely by human beings, especially since copyright protections require human authorship.

One way to allow access to databases for competitive and other concerns would be to include limited compulsory licensing provisions in the database legislation, perhaps similar to what was provided in earlier drafts of the Database Directive.⁹³ Companies could be required to provide access to some forms of data on fair and equitable terms, along parameters specified in the legislation. Models that focus on incentivising rather than mandating data sharing could also be considered. These have been explored in several jurisdictions and provide a way to alleviate competition concerns while also protecting the rights of database makers.⁹⁴

Given the overlap with regulators and stakeholders in various other sectors, any legislative framework on databases would need a robust personal data protection law, and should involve wide ranging public consultations before it is framed. Consultation with existing regulators is also essential, and would help prevent future conflicts and overlap.

ENDNOTES

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 "(1) Notwithstanding the right provided for in Article 2(5) to prevent the unauthorized extraction and re-utilization of the contents of a database, if the works or materials contained in a database which is made publicly available cannot be independently created, collected or obtained from any other source, the right to extract and re-utilize, in whole or substantial part, works or materials from that database for commercial purposes, shall be licensed on fair and non-discriminatory terms.
 (2) The right to extract and re-utilize the contents of a database shall also be licensed on fair and non-discriminatory terms if the database is made publicly available by a public body which is either established to assemble or disclose information pursuant to legislation, or is under a general duty to do so." See Bernt Hugenholtz, 'Abuse of Database Right: Sole-source information banks under the EU Database Directive', in Lévêque F, Shelanski H (Eds), 'Antitrust, patents and copyright: EU and US perspectives', Edward Elgar 2005, p.207
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