(iii) Article 11 covers countries belonging to the WPPT, but not to the Rome Convention (such as Canada, China, Hong Kong, Indonesia, Malaysia, and Singapore). Performances with a required connecting factor to such a country receive more limited protection, which does not include public lending of copies.

(iv) Article 12 covers parties only to the World Trade Organization (such as India, New Zealand, Pakistan, and South Africa), resulting in more limited protection Article 11 countries, which does not include the 'making available' right.

Section 185 of the 1988 Act, which confers equivalent rights on a person who is party to an exclusive recording contract, does so only if they or one of their licensees is a 'qualifying person'. A 'qualifying person' is defined as a 'qualifying individual' or a body corporate sufficiently connected with a 'qualifying country'.[82]

3 DATABASE RIGHT

Many different technologies organize and order information: encyclopaedias, filing cabinets, and textbooks all play their role in placing information in a usable format. Databases are another obvious example. While databases have existed in one form or another for a very long time, digital technology has transformed and revitalized databases. In particular, the digital database has enabled the production of facilities that enable easy access to vast collections of information. Examples familiar to lawyers include *Lexis* and *WestLaw*, as well as CD-ROMs such as the *Index to Legal Periodicals and Books*. The value of these facilities is the comprehensive nature of the information that they contain and the ease of access, rather than the way in which that information is ordered. While databases can cost a considerable amount of money to construct, they are readily copied. This makes them an ideal candidate for intellectual property protection.[83]

Faced with the fact that the level of protection varied, sometimes considerably, between member states,[84] the European Commission decided to harmonize the law that protected the effort that went into creating databases.[85] Eventually, these efforts led to the Database Directive,[86] which was implemented into the United Kingdom on 1 January 1998, in the Database Regulations.[87] The Database Directive required member states to introduce a two-tier system of protection for databases. The first tier involves retaining copyright protection for databases that are 'original'.[88] This was discussed in Chapters 3 and 4.[89] The Directive also requires member states to provide a second tier of protection by way

[82] CDPA 1988, ss 181, 185(3), 206(1).

[83] At least in economic theory: see Davison, 239*ff*, with criticisms; Derclaye, ch. 1.

[84] Some, such as the United Kingdom and Ireland, would probably have protected most databases by copyright; others would have done so by means of 'unfair competition'; the Nordic countries had adopted a special form of protection for catalogues and a burning issue remains as to what extent the Directive should be read as generalizing the latter position. On this, see Davison, 141.

[85] Complete uniformity has not been achieved because member states are able to retain unfair competition protection and to diverge in implementing exceptions: Database Dir., Arts 9, 13.

[86] See Chapter 2, section 7.5, pp. xx–xx; Davison, 50–68.

[87] Copyright and Rights in Databases Regulations 1997 (SI 1997/3032).

[88] Transitional provisions make it clear that databases that were already protected by copyright on 27 March 1996, but which would not reach the standards required under the Directive, continue to enjoy protection until the end of the copyright term.

[89] Chapter 3, section 2.6, pp. xx–yy; Chapter 4, section 3.4, pp xx–yy and sections 3.5.2–3.5.3, pp. xx–yy.

of a new *sui generis* right known as the 'database right'.[90] Database rights arise in relation to databases, including those that fail to reach the copyright's originality threshold.[91] The database right is separate from and in addition to any copyright protection that may exist in relation to a database. According to Jacob LJ: 'the policy of the Directive is that databases which cost a lot of investment and can readily be copied should be protected. The right is created to protect the investment which goes into the creation of a database.'[92]

Although at its inception this database right was described as 'one of the least balanced and most potentially anti-competitive intellectual property rights ever created',[93] much of its apparent strength was curtailed by the Court of Justice in four decisions: *Fixtures Marketing v. Oy Veikkaus*;[94] *Fixtures Marketing v. Organismoa Prognostikon Agnon Podosfairou*;[95] *Fixtures Marketing v. Svenska*;[96] and *British Horseracing Board v. William Hill*.[97] The first three concerned whether there was a database right in Premier League fixture lists, and the Court clearly indicated that there is not; *British Horseracing Board* concerned cumulative lists of runners and riders in British horse races and, following the Court's advice, this was held by the Court of Appeal not to be protected.[98]

3.1 SUBSISTENCE

The database right is a property right that subsists in a database whether made before or after 1 January 1998.[99] A 'database' is defined as 'a collection of independent works, data or other materials that are arranged in a systematic or methodical way, and are individually accessible by electronic or other means'.[100] We reviewed the meaning of 'database' in Chapter 3,[101] noting its potentially awesome breadth. The concept of 'database' includes subject matter as varied as: library catalogues such as the English Short Title Catalogue; lists of sports data; websites cataloguing species of animals and plants or nucleotides;[102] collections of email addresses; lists of second-hand cars (for sale); and topographical maps.

The database right arises only if there has been a substantial investment in obtaining, verifying, or presenting the contents of the database. 'Investment' includes any

[90] For an assessment, see P. B. Hugenholtz, 'Something Completely Different: Europe's Sui Generis Database Right' in S. Frankel and D. Gervais (eds.), *The Internet and the Emerging Importance of New Forms of Intellectual Property*, (2016), 205–22.

[91] Database Regs, reg. 13(2) (reflecting Database Dir., Art. 7(4)), says that it is immaterial whether or not the database or any of its contents are copyright works.

[92] *Football Dataco v. Sportradar* [2013] *EWCA Civ* 27, [44].

[93] J. Reichman and P. Samuelson, 'Intellectual Property Rights in Data?' (1997) 50 *Vand L Rev* 51, 81; Davison, 285.

[94] Case C-46/02 [2004] *ECR* I-10365 (ECJ, Grand Chamber) ('*Veikkaus*').

[95] Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber) ('*OPAP*').

[96] Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber) ('*Svenska*').

[97] Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber) ('*BHB* (ECJ)').

[98] *British Horseracing Board v. William Hill* [2005] *RPC* 883. For commentaries on the cases, see T. Aplin, 'The ECJ Elucidates the Database Right' [2005] *IPQ* 204; E. Derclaye, 'The Court of Justice Interprets the Database *Sui Generis* Right for the First Time' [2005] *ELR* 420; M. Davison and B. Hugenholtz, 'Football Fixtures, Horseraces and Spin Offs: The ECJ Domesticates the Database Right' [2005] *EIPR* 113.

[99] Database Regs, regs 13(1), 27–8 (implementing Database Dir., Arts 14(3), 16). It is immaterial whether or not the database or any of its contents is a copyright work, so that there may be a database right where there is no copyright, or there may be both copyright and a database right. It may also be possible for a database to attract copyright, but not the database right, if the selection and arrangement renders the collection the author's own intellectual creation, but there is not substantial 'human' investment in presenting the contents of the database.

[100] Database Regs, reg. 12.

[101] Chapter 3, section 2.6, pp. xx–yy.

[102] http://www.catalogueoflife.org/; http://www.ebi.ac.uk/ena.

investment, whether of financial, human, or technical resources.[103] Investment may be 'substantial' in terms of quality, quantity, or a combination of both. The former refers to 'quantifiable resources'; the latter, 'to efforts which cannot be quantified, such as intellectual effort or energy'.[104] Quite what level of investment the threshold 'substantiality' entails is yet to be clarified.[105] In the four fixtures cases, the Court of Justice did not comment on the Advocate-General's view that the Directive requires an absolute lower threshold for investments worthy of protection as a sort of *de minimis* rule, albeit at a low level; a high threshold level 'would undermine the intended purpose of the Directive, which was to create incentives for investment'.[106]

The act of 'obtaining' information is, it seems, to be distinguished from creating information: investment in creation is not relevant.[107] It is to be 'understood to refer to the resources used to seek out existing independent materials and collect them in the database, and not to the resources used for the creation as such of independent materials'.[108] So the investment in deciding which horses may run in a race was regarded as investment in the creation of data and thus to be disregarded when assessing whether a collection of such material was a database that resulted from substantial investment.[109] Equally, the resources deployed to determine the football league fixtures was an investment in creating data rather than the database. Finding and collecting, verifying, and presenting that existing data did not require 'any particular effort'.[110] The distinction between 'creating' and 'obtaining', however, will often not be straightforward: a number of commentators have suggested that scientific observation of natural phenomena 'creates' the resulting data.[111] In *Football Dataco v. Sportradar and Stan James*,[112] it was put to the English Court of Appeal that observations of events on a football field (who took throws, passed the ball, etc.) were not created as data until they were recorded. The Court rejected the argument as absurd.[113] It found the idea that data did not exist until it was recorded to be 'metaphysical' and one that would undermine the purpose of the Directive.[114] The distinction

[103] Database Regs, reg. 13; Database Dir., Recitals 7, 12, 39, 40 (right protects *any* investment and referring to various types). Note Derclaye, 74 (arguing that databases created by the state are unprotected because the state does not 'invest'); but cf. *Compass-Datenbank GmbH*, Case C-138/11, EU:C:2012:449 (ECJ, Third Chamber), [47] (implicitly accepting that such public authority, such as a register of companies, could have *sui generis* database right even though in collecting the data and maintaining the database, it was not operating as an economic entity).

[104] *Svenska*, Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber), [28]; *OPAP*, Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber) [44]; *Veikkaus*, Case C-46/02 [2004] *ECR* I-10365 (ECJ, Grand Chamber), [38].

[105] £600,000 per annum was clearly enough: *Football Dataco v. Sportradar and Stan James* [2013] *EWCA Civ* 27, [69]. But under 100 hours seems to have been regarded as ample in *Technomed v. Bluecrest Health Screening* [2017] *EWHC* 2142 (Ch) (Judge D Stone)

[106] *Svenska*, Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber), [39] (AG Stix-Hackl).

[107] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber).

[108] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber), [31]; *Svenska*, Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber), [24]; *OPAP*, Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber), [40]; *Veikkaus*, Case C-46/02 [2004] *ECR* I-10365 (ECJ, Grand Chamber), [34].

[109] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber), [38]; *BHB v. William Hill* [2005] *RPC* 883 (CA).

[110] *Svenska*, Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber), [36]; *OPAP*, Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber), [49]; *Veikkaus*, Case C-46/02 [2004] *ECR* I-10365 (ECJ, Grand Chamber), [44].

[111] B. Hugenholtz and M. Davison, 'Football Fixtures, Horseraces and Spin-offs; The ECJ Domesticates the Database Right' [2005] *EIPR* 113; L. Bygrave, 'The Data Difficulty in Database Protection' (2013) 35 *EIPR* 25–33.

[112] [2013] *EWCA Civ* 27.

[113] Ibid., [41]–[42].

[114] Ibid., [39].

between creating data and collecting it must be drawn pragmatically. The English courts, at least, are willing to interpret the criteria so as to confer protection on customer lists (even though the artificial incentive provided by the database right hardly seems relevant in such cases).[115]

In *British Horseracing Board*, 'verification' was described as monitoring the accuracy of the materials when the database is created and during its operation; it does not include verification during the stage of creation of data.[116] In the three *Fixtures Marketing* references, Advocate-General Stix-Hackl had observed that 'presentation' 'entails not only the presentation for users of the database, that is to say, the external format, but also the conceptual format, such as the structuring of the contents'.[117] The Court of Justice did not comment on this.

The basic term of protection is 15 years.[118] More specifically, the database right expires 15 years from the end of the calendar year in which the database was completed.[119] However, where a database is made available to the public before the end of the period of 15 years from the year in which it was made, rights in the database expire 15 years from the end of the calendar year in which the database was first made available to the public. It is possible that a database right might subsist for 30 years (and thereafter be extended, as discussed later). Where copies of the database as published bear a label or a mark stating that the database was first published in a specified year, the label or mark shall be presumed to be correct until the contrary is proved.[120]

It is important to note that a new period of protection may be acquired for a database. For this to occur, there must be a substantial change *to the contents* of the database.[121] This will include a substantial change resulting from the accumulation of successive additions, deletions, or alterations (so long as the changes constitute a substantial new investment in the database). In these circumstances, the 'new' database qualifies for its own term of protection, but probably only as regards those contents that reflect the new substantial investment. In many cases, therefore, it will be legitimate to extract contents that are more than 15 years old from the database, even if the accuracy of those contents has been verified.[122] While the idea of giving a new period of protection to an updated database may seem no less justified than the idea of giving the authors of the third edition of a textbook copyright in the new edition, problems exist in relation to databases because many are subject to a process of continual updating. For example, in *British Horseracing Board*, the BHB database was constantly being updated, so that 800,000 new records or changes to existing records were being made each year—that is, more than 2,000 a day. In these cases, which Laddie J has described as relating to 'dynamic databases',[123] there are clear difficulties in deciding when a sufficient alteration of the contents will have occurred as to render the database a new, separate database.

[115] *British Sky Broadcasting Group plc v. Digital Satellite Warranty Cover Ltd* [2011] *EWHC* 2662, [19]–[21]; *Flogas Britain Ltd v. Calor Gas Ltd* [2013] *EWHC* 3060 (Ch), [108] (Proudman J); cf. *Pintorex Ltd v. Keyvanfar* [2013] *EWPCC* 36, [11]–[13] (Alastair Wilson QC.)

[116] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber, [34]; *Svenska*, Case C-338/02 [2004] *ECR* I-10497 (ECJ, Grand Chamber), [27]; *OPAP*, Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber), [43].

[117] For example, *OPAP*, Case C-444/02 [2004] *ECR* I-10549 (ECJ, Grand Chamber), [AG78].

[118] Where the making of a database was completed on or after 1 January 1983, the right begins to subsist in the database for the period of 15 years beginning on 1 January 1998: Database Regs, reg. 30.

[119] Database Regs, reg. 17 (implementing Database Dir., Art. 10).

[120] Database Regs, reg. 22(3); cf. Database Dir., Recital 53.

[121] Database Regs, reg. 17(3); Database Dir., Art. 10(3), Recitals 54, 55.

[122] Derclaye, 141–2.

[123] *British Horseracing Board v. William Hill* [2001] *ECDR* 257, 283–5 (Laddie J), [2002] *ECDR* 41 (CA).

3.2 MAKERS AND OWNERS

The 'maker' of a database is the first owner of the database right.[124] Subject to an exception as regards employees,[125] the maker of the database is the person who takes the initiative in obtaining, verifying, or presenting the contents of a database, and who assumes the risk of investing in that obtaining, verification, or presentation.[126] The implication of this is that the maker must take the initiative *and* the risk of the investment. If one person takes the risk and another person takes the initiative, joint making may occur. Where a database is made by an employee in the course of employment, unless otherwise stipulated the employer is regarded as the maker of the database.[127]

A number of presumptions simplify the task of proving ownership.[128] Where a name purporting to be that of the maker appears on copies of the database as published or on the database when it was made, the person whose name appeared is presumed to be the maker of the database and to have made it in an employment relationship. Where copies of the database as published bear a label or a mark naming a person as the maker of the database, the label or mark is presumed to be correct. Both presumptions are rebuttable.

The database right is an assignable property right, and sections 90–93 of the 1988 Act apply to the database right as they would to copyright works. It is also possible to license database rights, and licensing schemes and licensing bodies are subject to supervision in accordance with Schedule 2. The jurisdiction of the Copyright Tribunal has been extended accordingly.

3.3 INFRINGEMENT, RIGHTS, AND REMEDIES

The database right is infringed where a person, without the consent of the owner of the right, 'extracts' or 'reutilizes' all or a substantial part of the contents of the database. The owner of database right must prove that the alleged infringer has derived the material from the claimant's database, whether directly or indirectly.

'Extraction' means the permanent or temporary transfer of those contents to another medium by any means or in any form.[129] 'Reutilization' means making those contents available to the public by any means.[130] In *BHB*, the Court of Justice indicated that the concepts must be interpreted in the light of the objective pursued by the Directive—namely, promoting investment in the creation and maintenance of databases.[131] Consequently, the terms are defined widely, to refer to:

[124] Database Regs, reg. 15. For a discussion of some uncertainties, see M. Koščík and M. Myška, 'Database Authorship and Ownership of Sui Generis Database Rights' (2017) 31 *International Review of Law, Computers & Technology* 43.

[125] In fact, in the United Kingdom, much of the litigation over database right has involved actions by employers against former employees over customer or supplier lists: *Pennwell Publishing (UK) v. Ornstein and ors* [2007] *EWHC* 1570 (QB) (Judge Fenwick QC); *MPT Group v. Peel et ors* [2017] *EWHC* 1222 (Ch). For a decision in which the Court was rather disapproving of the addition of a database right claim to the sizeable arsenal of legal actions invoked against a former employee, see *Pintorex Ltd v. Keyvanfar* [2013] *EWPCC* 36, [11]–[13] (Judge Alastair Wilson QC) (referring the addition to the claim of breach of confidence one based on database right as 'such troublesome allegations').

[126] Database Regs, reg. 14; Database Dir., Recital 41.

[127] Database Regs, reg. 14(2).

[128] Database Regs, reg. 22(1).

[129] Database Dir., Art. 7(2)(a); *Apis Hristovich EOOD v. Lakorda ad*, Case C-545/07 [2009] *ECR* I-1627 (ECJ, Fourth Chamber) ('*Apis*'), [44].

[130] Database Dir, Art. 7(2)(b).

[131] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber), [46].

> . . . any act of appropriating and making available to the public . . . the results of his investment, thus depriving him of revenue which should have enabled him to redeem the cost of the investment.[132]

This might include indirect, as well as direct, extraction or reutilization.[133] In the case at hand, the Court held that William Hill had extracted data (albeit indirectly) and reutilized those data by making them available to the public on its Internet betting site.[134] In a later case, the Court clarified that there can be an extraction where a person consults a database and uses the results, rather than physically transfers them from one database to another.[135] The case concerned a database of poems, which the defendant had consulted before making its own database, named *A Thousand Poems Everyone Should Have*. The Court stated that the concept of extraction was to be given a broad construction and was not limited by technology (the extraction need not be electronic) or by purpose,[136] or by whether the contents were modified.[137] The Court left it to the referring court to determine whether the extraction had been substantial.

Extraction necessarily presupposes derivation. Inevitably, questions of proof will arise similar to those discussed in Chapter 8. In *Apis Hristovich EOOD v. Lakorda ad*,[138] the Court of Justice indicated that the question was one of fact for the national tribunal, but inferences might be drawn from the presence of the same material in the alleged infringing database, especially in the absence of any explanation of such coincidence.

In *Innoweb*,[139] the operator of a website which advertised second-hand cars brought an action against a 'meta-search engine' dedicated to car sales, which offered the user improved search ability. The Court found that this was a making available of the whole of the claimant's database, and thus a 'reutilization', irrespective of the actual number of results actually found and displayed for every query keyed. In so holding, the Court recognized that the effect of the system was that users would not need to go to the claimant's site, thereby reducing its attractiveness to advertisers, so the commercial effect was similar to creating a 'parasitical competing product . . ., albeit without copying the information stored in the database concerned'.[140]

The act of extraction or reutilization must occur in relation to a 'substantial' part of the contents of the database. This means substantial in terms of quantity or quality or a combination of both. The Court in *BHB* held that this is assessed by reference to the investment in the creation of the database and the prejudice caused to that investment by the act of extracting or reutilizing that part.[141] The quantitative assessment compares the

[132] Ibid., [51]. [133] Ibid., [52].

[134] Ibid., [65]. On the location of the act, see *Football Dataco v. Sportradar*, Case C-173/11, [2013] 1 *CMLR* (29) 903 (ECJ, Third Chamber), [39].

[135] *Directmedia Publishing GmbH v. Albert-Ludwigs-Universität Freiburg and Professor Ulrich Knoop*, Case C-304/07 [2008] *ECR* I-7565 (ECJ, Fourth Chamber).

[136] Ibid., [46]–[47]; see also *Apis*, Case C-545/07 [2009] *ECR* I-1627 (ECJ, Fourth Chamber), [46].

[137] *Directmedia Publishing GmbH v. Albert-Ludwigs-Universität Freiburg and Professor Ulrich Knoop*, Case C-304/07 [2008] *ECR* I-7565[39]; *Apis*, Case C-545/07 [2009] *ECR* I-1627 (ECJ, Fourth Chamber), [47]–[48].

[138] *Apis*, Case C-545/07 [2009] *ECR* I-1627 (ECJ, Fourth Chamber), [50]–[55]. See further S. Vousden, '*Apis*, Databases and EU Law' [2011] *IPQ* 215.

[139] Case C-202/12, EU:C:2013:850 (Fifth Chamber).

[140] Ibid, [48]. [141] Case C-203/02 [2004] *ECR* I-10415, [69].

volume of data extracted to the volume of the whole contents of the database. However, an extraction/reutilization of a part will also be substantial if it represents a significant part of the investment viewed qualitatively—that is, in terms of human, technical, or financial investment in obtaining, verification, or presentation of the database. The intrinsic value of the material taken is irrelevant;[142] so too is the investment in the creation of those data.[143] If a database comprises a bundle of modules (such as a legal database divided into legislation, case law, commentary, and journals), the question of whether there has been an extraction of a substantial part can be assessed against each module insofar as the module concerned reaches the threshold for protection (that is, is a result of substantial investment). If the module itself does not qualify, then an extraction must be assessed against the collection of modules as a totality.[144]

Regulation 16(2) provides that the repeated and systematic extraction or reutilization of insubstantial parts of the contents of a database may come to amount to the extraction or reutilization of a substantial part of those contents. This will be infringement only where it comprises acts 'which conflict with a normal exploitation of that database or which unreasonably prejudice the legitimate interests of the maker of the database'.[145] The Court of Justice has taken a purposive view: the Regulation on insubstantial parts is 'to prevent circumvention of the prohibition in Article 7(1)'; the systematic and repeated uses must be such that they would lead to the reconstitution of a substantial part of the database, and thus cumulatively would seriously prejudice the investment made by the maker of the database.[146] In the Court's view, William Hill's uses were systematic and repeated, but not infringing, because there was 'no possibility that, through the cumulative effects of its acts, William Hill might reconstitute and make available the whole or a substantial part of the contents of the BHB database'.[147]

The database right allows the maker to control the first sale, but not the subsequent distribution, of hard copies on which data is stored. Where a copy of a database has been sold within the EEA by, or with the consent of, the owner of the database right in the database, further sales within the EEA of that copy shall not constitute the extraction or reutilization of the contents of the database. It is interesting that the right is exhausted only by 'sale' and not by other forms of transfer.[148] Consequently, the sale by a customer of gratuitously distributed copies of databases, such as British Telecom telephone directories, may infringe. Oddly, where there has been first sale of hard copies on which data are stored, the Regulations permit only resale and not other forms of transfer. The Regulations appear to suggest that the lawful buyer of a copy of a database can neither give it away, nor rent it.[149]

In relation to the remedies available for breach of the database right, the Database Regulations provide that equivalent provisions of the 1988 Act apply in relation to the database right and databases in which that right subsists as apply in relation to copyright and copyright works.[150]

[142] Ibid., [72], [78]. [143] Ibid., [79].
[144] *Apis*, Case C-545/07 [2009] *ECR* I-1627 (ECJ, Fourth Chamber).
[145] Database Dir., Art. 7(5).
[146] *BHB* (ECJ), Case C-203/02 [2004] *ECR* I-10415 (ECJ, Grand Chamber [86]-[87].
[147] Ibid., [91]. [148] Database Regs, reg. 12(3). [149] Database Regs, reg. 12(2).
[150] See Chapter 49.

3.4 EXCEPTIONS AND DEFENCES

3.4.1 Lawful use

A lawful user of a database that has been made available to the public in any manner is entitled to extract or reutilize insubstantial parts of the contents of the database for any purpose.[151] This limitation may not be excluded by agreement.[152]

3.4.2 Fair dealing

Where a database has been made available to the public in any manner, the database right is not infringed by a fair dealing with a substantial part of its contents if three conditions are satisfied: (i) if that part is extracted from the database by a person who is a lawful user of the database; (ii) if it is extracted for the purpose of illustration for teaching or research and not for any commercial purpose; and (iii) if the source is indicated.[153] With respect to 'text and data mining', the government expressed the view that it was unnecessary to modify the exception to add something equivalent to the new section 29A (introduced in June 2014).[154] In its view, the existing exception was sufficiently broad to encompass acts falling within the new copyright exception.

3.4.3 Public lending

An exception is also made for public lending.[155] For lending to be 'public', it must take place through an establishment that is accessible to the public. Such an establishment is permitted to charge borrowers an amount that does not go beyond what is necessary to cover the costs of the establishment.[156] However, permitting remote access is not deemed to constitute a lending. Bizarrely, the exception for public lending does not apply to the making of a copy of a database available for on-the-spot reference use. Even if the lending is gratuitous and in a public establishment, the Regulations suggest that it may be an infringement.[157]

3.4.4 Other defences

Defences also exist in relation to parliamentary and judicial proceedings, royal commissions and statutory inquiries, material open to public inspection or on an official register, material communicated to the Crown in the course of public business, public records,

[151] Database Regs, reg. 19; Database Dir., Art. 8. The definition of 'lawful user' is problematic: see Chapter 9, section 16, pp. xxx–xx. See also Derclaye, 120–6.

[152] *Ryanair v. PR Aviation BV*, Case C-30/14, EU:C:2015:10, [39]–[40] (describing the right as 'mandatory rights for lawful users of databases', though holding that the only limits on contract in relation to databases that are not protected by copyright or database right are those inherent in national law). See further T. Synodinou, 'Databases and Screen-Scraping' [2016] *EIPR* 313, 315 (noting the possible role of competition law); P. Mysoor, (2017) 131 *LQR* 556; M. Borghi and S. Karapapa, [2015] *EIPR* 505; S. Vousden, 'Autonomy, Comparison Websites, and *Ryanair*' [2015] *IPQ* 386 (all, from different perspectives, critical of the CJEU decision).

[153] Database Regs, reg. 20(1); Database Dir., Art. 9(b). Criticized by the Royal Society as 'vague and unhelpful': Royal Society, *Keeping Science Open: The Effects of Intellectual Property on the Conduct of Science* (2003), [5.5].

[154] HM Government, *Technical Review of the Draft Legislation on Copyright Exceptions: Government Response* (2014), 13 (stating that the exception 'will permit the extraction of whole works if required for text and data mining through the provision for 'fair dealing with a substantial part').

[155] Database Regs, reg. 12(2); Database Dir., Art. 7(2). [156] Database Regs, reg. 12(3).

[157] Database Regs, reg. 12(4).

and acts done under statutory authority.[158] The Regulations also provide a defence where the extraction or reutilization occurs at a time when the identity of the maker could not be ascertained by reasonable inquiry, or in pursuance of arrangements made at a time when such identification was not possible. It must also be reasonable to assume that the database right has expired.[159] Competition law will also apply to the database right in the same way as to other intellectual property rights.[160] This is considered in Chapter 12.

3.5 FOREIGN DATABASES

The database right will subsist only where, at the material time,[161] its maker was either: a national of an EEA state; habitually resident within the EEA; a body incorporated under the law of an EEA state; a body with its principal place of business or its registered office within the EEA; or a partnership or other unincorporated body that was formed under the law of an EEA state, which, at that time, satisfied certain conditions.[162]

3.6 ASSESSMENT

Although the Database Directive had been described by many as unduly protective, the Court of Justice cases have seriously curtailed the perceived excesses (by limiting the availability of protection of sole-source databases).[163] In December 2005, the Commission issued an evaluation of the effect of the Directive and was disappointed to find that the number of databases created in 2004 had declined to pre-Directive levels.[164] The Commission then embarked on a stakeholder consultation, asking whether stakeholders favoured maintenance of the status quo, repeal of the whole Directive (including its copyright components), repeal of the *sui generis* database right, or modification of the latter right.[165] Most respondents favoured reform of the right, but they were divided over whether the right should be strengthened or the exceptions broadened.[166] The Commission has now launched a new public consultation,[167] and commissioned a study. It is particularly concerned as to how the database right may operate in the changing digital economy associated with the 'Internet of Things'.

One possible set of reforms might be to subject the database right to the formality of prior registration, possibly with the EUIPO, thereby creating a unitary title.[168] We see this idea as attractive because the broad notion of 'database' renders many persons right

[158] Database Regs, Sch. 1. These correspond to the provisions of CDPA 1988, ss 45–50, and Database Dir., Art. 9(c).

[159] Database Regs, reg. 21(1).

[160] Database Dir., Recital 47.

[161] Database Regs, reg. 18. The 'material time' means the time when the database was made or, if the making extended over a period, a substantial part of that period.

[162] Database Regs, reg. 18(2).

[163] Derclaye, 96; M. Leistner, 'Case Comment' (2005) *IIC* 581, 593–4; M. Leistner, 'The Protection of Databases', in E. Derclaye (ed.), *Research Handbook on the Future of EU Copyright* (2009), 427, 437–8; S. von Lewinski, in Walter and von Lewinski, [9.7.8], n. 251.

[164] European Commission, *DG Internal Market and Services Working Paper: First Evaluation of Directive 96/9/EC on the Legal Protection of Databases* (12 December 2005), [1.4], [4.23].

[165] Ibid., 25–7, [6.1]–[6.4].

[166] European Commission, *Protection of Databases* (2014), available online at http://ec.europa.eu/internal_market/copyright/prot-databases/index_en.htm.

[167] https://ec.europa.eu/digital-single-market/en/news/summary-report-public-consultation-legal-protection-databases.

[168] M. Leistner, 'Big Data and the Database Directive 96/9/EC: Current Law and Potential For Reform', in S. Lohsse (et al.) (eds), *Trading Data in the Digital Economy: Legal Concepts and Tools* (2017), 27, 57.

holders even where they might not know or care about obtaining exclusive rights. In relation to many websites, amateur and scientific databases, both for makers and users, the automatic quality of database right adds a wholly unnecessary set of regulatory burdens. A registration system would allow businesses that genuinely require exclusivity to 'opt in' to protection. Registration also seems particularly useful for a right that has a fixed term, because the register would provide notice to the public as to when a database is protected, and when it falls into the public domain. If a database maker reinvests substantially in the database, the registration system would facilitate renewal or re-registration (accompanied by an indication as to the investment made).

4 TECHNOLOGICAL PROTECTION MEASURES

As mentioned in Chapter 11, copyright owners have begun to exploit copyright-protected works using self-help mechanisms in the form of 'technological measures of protection'. This new mode of exploitation reflects real fears amongst the right holders that digital reproduction and communication technologies present the threat of such widespread private copying that copyright law, by itself, could not be relied upon to protect the investment involved in creating and publishing the work. Such technological protection measures include: encryption and similar access controls, which encode works so that only those with legitimate keys can obtain access; and copy controls, which allow users access to works, but operate to prevent the subsequent making of copies.

The use of technological measures to support copyright is reinforced by complex and extensive laws prohibiting circumvention of such measures. The reinforcement is by way of a mesh of overlapping civil and criminal actions. This complex topic deserves treatment separate from secondary infringement of copyright, but as 'related rights', for two reasons: first, because the measures are, in many cases, not limited to those applied to protect copyright works, but also protect performances and the *sui generis* database right; and second, because the civil rights of action are frequently conferred not only on the copyright holder who applies the measure to the work, but also on the person issuing copies to the public in protected form and any other person with intellectual property rights in the technological measure employed.

The CDPA 1988, as amended, contains three categories of provision dealing with situations in which a person facilitates access to works that the person concerned is not entitled to use or receive.[169] The first category, in sections 296ZA–ZF, relates to the circumvention of effective technological measures applied to copyright works other than computer programs and is designed to implement Article 6 of the Information Society Directive.[170] The second category, which is found in section 296, applies only to computer programs (and is intended to implement Article 7(1)(c) of the Software Directive). The third category, in

[169] P. Vantsiouri, 'A Legislation in Bits and Pieces: The Overlapping Anti-Circumvention Provisions of the Information Society Directive, the Software Directive and the Conditional Access Directive and Their Implementation in the UK' (2012) 34(9) *EIPR* 587. Note that other causes of action might be available based on 'communication to the public' (see Chapter 6, section 6, pp. xxx–xxx), or accessory liability (where the end user, for example, makes a copy) (see Chapter 48, section 3.5, pp. xxx–xxx), and other sources of criminal liability may exist under the Fraud Act 2006, ss 6, 7, and 11 and the Serious Crimes Act 2007, ss 44–46.

[170] CDPA 1988, ss 297ZA(1), (6), and 296 ZD(1), (8) (copyright works—other than computer programs—performances, database right, publication right); Info. Soc. Dir., Recital 50 (without prejudice to Software Dir.). In turn, Art. 6 implements WCT, Art. 11, and WPPT, Art. 18.