

## The Quality of Life: Protecting Non-personal Interests and Non-personal Data in the Age of Big Data

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**Abstract:** Under the current legal paradigm, the rights to privacy and data protection provide natural persons with subjective rights to protect their private interests, such as related to human dignity, individual autonomy and personal freedom. In principle, when data processing is based on non-personal or aggregated data or when such data processes have an impact on societal, rather than individual interests, citizens cannot rely on these rights. Although this legal paradigm has worked well for decades, it is increasingly put under pressure because Big Data processes are typically based indiscriminate rather than targeted data collection, because the high volumes of data are processed on an aggregated rather than a personal level and because the policies and decisions based on the statistical correlations found through algorithmic analytics are mostly addressed at large groups or society as a whole rather than specific individuals. This means that large parts of the data-driven environment are currently left unregulated and that individuals are often unable to rely on their fundamental rights when addressing the more systemic effects of Big Data processes. This article will discuss how this tension might be relieved by turning to the notion ‘quality of life’, which has the potential of becoming the new standard for the European Court of Human Rights (ECtHR) when dealing with privacy related cases.

**Résumé:** Dans le paradigme juridique actuel, les droits à la vie privée et à la protection des données confèrent aux personnes physiques des droits subjectifs de protéger leurs intérêts privés, tels que ceux liés à la dignité humaine, à l’autonomie individuelle et à la liberté personnelle. En principe, lorsque le traitement des données est basé sur des données non personnelles ou agrégées ou lorsque ces traitements de données ont un impact sur des intérêts sociétaux plutôt que individuels, les citoyens ne peuvent pas se prévaloir de ces droits. Bien que ce paradigme juridique ait bien fonctionné pendant des décennies, il est de plus en plus mis sous pression parce que les processus de Big Data reposent généralement sur une collecte de données aveugle plutôt que ciblée, parce que les volumes élevés de données sont traités à un niveau agrégé plutôt que personnel et parce que les politiques et les décisions basées sur les corrélations statistiques trouvées grâce à l’analyse algorithmique sont principalement adressées à de grands groupes ou à la société dans son ensemble plutôt qu’à des individus spécifiques. Cela signifie que de grandes parties de l’environnement axé sur les données ne sont actuellement pas réglementées et que les individus sont souvent incapables de faire valoir leurs droits fondamentaux lorsqu’ils abordent les effets plus systémiques des processus Big Data. Cet article discutera de la façon dont cette tension pourrait être soulagée en se tournant vers la notion de « qualité de vie », qui a le potentiel de devenir la nouvelle norme pour la Cour européenne des droits de l’homme lorsqu’elle traite des affaires liées à la vie privée.

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**Zusammenfassung:** Nach dem gegenwärtigen Rechtsparadigma gewähren die Rechte auf Privatsphäre und Datenschutz natürlichen Personen subjektive Rechte zum Schutz ihrer privaten Interessen, beispielsweise in Bezug auf die Menschenwürde, die individuelle Autonomie und die persönliche Freiheit. Grundsätzlich können sich Bürger nicht auf diese Rechte berufen, wenn die Datenverarbeitung auf nicht personenbezogenen oder aggregierten Daten basiert oder wenn diese Datenverarbeitungen Auswirkungen auf gesellschaftliche und nicht auf individuelle Interessen haben. Obwohl dieses Rechtsparadigma seit Jahrzehnten gut funktioniert, gerät es zunehmend unter Druck, weil Big-Data-Prozesse typischerweise eher auf wahlloser als auf gezielter Datenerhebung basieren, weil die hohen Datenmengen auf aggregierter und nicht auf personenbezogener Ebene verarbeitet werden und weil die Richtlinien und Entscheidungen, die auf statistischen Korrelationen basieren, die durch algorithmische Analytik gefunden werden, richten sich meist an große Gruppen oder die Gesellschaft insgesamt und nicht an einzelne Einzelpersonen. Dies bedeutet, dass große Teile der datengesteuerten Umgebung derzeit unreguliert bleiben und Einzelpersonen oft nicht in der Lage sind, sich auf ihre Grundrechte zu berufen, wenn sie die systemischeren Auswirkungen von Big-Data-Prozessen angehen. In diesem Artikel wird erörtert, wie diese Spannung durch eine Hinwendung zum Begriff ‘Lebensqualität’ abgebaut werden könnte, der das Potenzial hat, zum neuen Standard für den Europäischen Gerichtshof für Menschenrechte bei der Behandlung von Fällen im Zusammenhang mit der Privatsphäre zu werden.

## 1. Introduction

1. There is a street in the Dutch city of Eindhoven called Stratumseind. Densely populated with pubs, it is the heart of the nightlife area. Although the area used to be known for its tranquillity and friendly atmosphere, over time, nightly aggression and violence began to dominate. To stop the negative spiral and revive some of the old atmosphere, the municipality launched the project Stratumseind 2.0. In collaboration with a number of private parties, the city began studying people that entered Stratumseind in every possible way. Smart cameras automatically register how many people move in and out and determine whether they move by foot, bicycle or motorized vehicle. Heat sensors measure body temperature and conversations are analysed with the use of sensors. These data are linked to open source data, such as Twitter feeds, and to the city’s various databases. By connecting these data and by using smart devices, the police can be alarmed as soon as a fight occurs.<sup>1</sup>

2. By analysing thousands of audio recordings of screams that preceded violent incidents - and comparing those to the sound recorded in a smart city - algorithms

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1 M. GALIĆ, ‘Surveillance, Privacy and Public Space in the Stratumseind Living Lab: The Smart City Debate, Beyond Data’, *Ars Aequi* 2019(3).

can determine whether a person's voice has an aggressive undertone.<sup>2</sup> Cameras can also record facial expressions and derive a person's emotional state.<sup>3</sup> If the screams or facial expressions of people in a smart city resemble those that preceded previous aggressive outbursts, the police can be alarmed and intervene even before a potential incident takes place. But Eindhoven's goal is even more audacious: it wants to ban every form of aggression. To achieve this goal, the municipality has partnered with university staff and experts in the field of behaviour manipulation. Eindhoven is not just a smart city - an environment that collects data and uses those data to make context-dependent decisions - it is a living lab too.

3. Social experiments used to be carried out in artificial settings, such as a room in a university building, meaning that people are aware that they are participating in an experiment - they have signed up for it - and that the environment is artificial - e.g., an easy couch and a plant in a classroom to mimic a cosy atmosphere will not really give participants the feeling that they are home. Both factors (unconsciously) influence the behaviour of participants and the reliability of the test results. In living labs, those factors are removed, as scientists and companies can perform tests in the public sphere: a natural environment where people are not aware that they are being experimented on. Various tests have been carried out and more are planned in Stratumseind to prevent people from becoming aggressive. For example, when pubs close at night, street lanterns lit the area with soft, red light, making the transition from the pub to the public space less abrupt than when white light is used. Experiments will also be run with spraying tangerine scent in the streets, as people become tranquil when inhaling the sweet perfume of fruit.

4. This is just one example of how data-driven technologies and experiments have an effect on societies, social relations and citizens' daily lives. Big Data is a key term in smart cities and living labs around the world and is essential to many other data-driven projects and applications, such as predictive policing and mass surveillance, behavioural advertising and robotics, self-driving cars and social credit scoring. Big Data should be seen as an ideal-concept: the more data are gathered, the higher the speed with which the data are processed, the more data sources are combined, etc., the more a data-driven application or technology resembles the ideal-concept of Big Data. Big Data is a process that runs through three phases:

- Gathering: The basic philosophy of Big Data is that the larger the dataset is, the richer the patterns and correlations found and the more valuable the conclusions that can be drawn therefrom will be (the

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2 T. VOGT, T., E, ANDRÉ & N. BEE, 'EmoVoice - A Framework for Online Recognition of Emotions from Voice', in *International Tutorial and Research Workshop* (Berlin: Springer 2008).

3 L. C. DE SILVA & S. C. HUI, 'Real-Time Facial Feature Extraction and Emotion Recognition', *IEEE* 2003.

more data, the merrier; the goal of n=all). Relying on smart computers<sup>4</sup> and self-learning algorithms, Big Data programs can continue to learn and become ‘smarter’.<sup>5</sup> Being able to work on so-called unstructured and dirty data (a synonym for large datasets where the data are unstructured and have not been categorized or labelled),<sup>6</sup> data-analytics can be used to link and merge different data sources and to enrich existing databases with information that is scraped from the internet: the algorithm will be able to assess the values of and relationships between the disparate categories in the various databases. Because Big Data revolves around analysing large amounts of aggregated data, the quality of specific datapoints is becoming less and less important (quantity over quality) and because data collection and storage is so cheap, data are often gathered without a predefined purpose, determining only afterwards whether data can be of use and if so, how.

- Analysing: The analysis of the data is typically focussed on finding general characteristics, patterns and group profiles (groups of people, of objects or of phenomena). General characteristics can regard, for example, how earthquakes typically evolve and the indicators that can predict which constructions are likely to collapse after a disaster. Programs used for analysing data are typically based on statistics - the analysis revolves around finding statistical correlations rather than causal relations.<sup>7</sup> Statistical correlations typically involve probabilities, e.g., that there is a 71% chance that people that place felt pads under the legs of their chairs repay their loan, while this is only 56% for people that don’t. Consequently, information about one aspect of life can be used to infer probabilistic information on other aspects of life.<sup>8</sup>
- Use: The correlations gained and the profiles and patterns construed through algorithmic data analytics can be used to inform decision - and policy-making.<sup>9</sup> Big Data can be used to create retroactive insights,

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- 4 A. VERMA, A. TRIPATHI & T. CHOUDHURY, ‘Implementing Brain-Machine Interface (BMI) with Smart Computing’. in *Computational Intelligence in Pattern Recognition* (Singapore: Springer, 2020).
  - 5 S. POUYANFAR, ‘A Survey on Deep Learning’, *ACM Computing Surveys (CSUR)* 2019.
  - 6 J. PICADO, J. DAVIS, A. TERMEHCHY, & G. Y. LEE, ‘Learning Over Dirty Data Without Cleaning’, in *Proceedings of the 2020 ACM SIGMOD International Conference on Management of Data* pp. 1301-1316.
  - 7 D. CHANDLER, ‘A World Without Causation: Big Data and the Coming of Age of Posthumanism’, *Millennium* 2015(3), p 43.
  - 8 R. KITCHIN, ‘Big Data, New Epistemologies and Paradigm Shifts’, *Big Data & Society* 2014(1), p 1.
  - 9 D. BOLLIER, & C. M. FIRESTONE, *The Promise and Peril of Big Data* (Washington, DC: Aspen Institute 2010).

but is used primarily for now - and forecasting.<sup>10</sup> The insights are mostly used for developing general policies, such as when data-analysis predicts that in 20 years' time, a large percentage of the population will be obese, and the government decides to introduce a fat-tax. On the level of a group or category, organizations can adopt specific measures related to the core characteristics of that group, such as that men in certain age groups have to pay more for a car insurance, that bridges built from a certain material need to be checked more often than those not composed of said material or that women between 45-65 living in affluent neighbourhoods will be shown advertisements for piano recitals performed at their local concert hall.

5. This article will explain that while the current privacy paradigm grants subjective rights to natural persons to protect their individual interests, Big Data processes tend to transcend the individual (section 2). Because it is undesirable to leave large parts of the data-driven environment unregulated, this article will discuss how this tension might be relieved by utilizing the doctrine of 'quality of life', which the European Court of Human Rights (ECtHR) deploys when dealing with an increasing number of cases under the right to privacy, Article 8 of the European Convention on Human Rights (ECHR). Three examples of how this notion plays a progressively important role will be discussed, namely with respect to environmental issues (section 3), matters in the medical domain (section 4) and the protection of minorities and vulnerable groups (section 5). This article will suggest that by making the quality of life the yardstick to assess large data-driven technologies and applications, the gap that exists between the legal paradigm and the technological reality could be closed (section 6). Finally, the conclusion will suggest why and how this may connect to the spirit of the General Data Protection Regulation (GDPR) (section 7).

## 2 The Current Privacy Paradigm and Big Data

6. The current privacy paradigm is to a large extent based on and aimed at providing protection to the individual interests of natural persons by granting them subjective claim rights. Under Article 8 of the ECHR, in principle, only natural persons are allowed to invoke the right to privacy.<sup>11</sup> This also holds true for the right to data protection, as contained, inter alia, in the Charter of

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10 B. Bok, et al., 'Macroeconomic Nowcasting and Forecasting with Big Data', 10. *Annual Review of Economics* 2018, pp 615-643.

11 B. VAN DER SLOOT, 'Do Privacy and Data Protection Rules Apply to Legal Persons and Should They?', *Computer Law & Security Review* 2015 p 1; B. VAN DER SLOOT, 'Do Groups Have a Right to Privacy and Should They?', in L. TAYLOR, L. FLORIDI & B. VAN DER SLOOT (eds), *Group Privacy* (Dordrecht: Springer 2017).

Fundamental Rights of the European Union (CFR)<sup>12</sup> and the GDPR,<sup>13</sup> as the notion of ‘personal data’ refers to ‘any information relating to an identified or identifiable natural person’<sup>14</sup> and recitals to the GDPR make it clear that the right neither applies to deceased persons nor to legal persons.<sup>15</sup>

7. This means that the rights to privacy and data protection can only be invoked by natural persons. In addition, they can only do so in order to protect their own private interests. For example, under Article 8 ECHR, a number of claims are typically rejected:

- So called *in abstracto* claims are in principle declared inadmissible. These are claims that regard the mere existence of a law or a policy, without them having any concrete or practical effect on the claimant. ‘Insofar as the applicant complains in general of the legislative situation, the Commission recalls that it must confine itself to an examination of the concrete case before it and may not review the aforesaid law in abstracto. The Commission therefore may only examine the applicant’s complaints insofar as the system of which he complains has been applied against him’.<sup>16</sup>
- Hypothetical and *a priori* claims are rejected as well, as the Court will in principle only receive complaints about injury which has already materialized. ‘It can be observed from the terms “victim” and “violation” and from the philosophy underlying the obligation to exhaust domestic remedies [] that in the system for the protection of human rights conceived by the authors of the Convention, the exercise of the right of individual petition cannot be used to prevent a potential violation of the Convention: in theory, the organs designated [] cannot examine - or, if applicable, find - a violation other than a posteriori, once that violation has occurred. Similarly, the award of just satisfaction, i.e., compensation, under Article 50 of the Convention is limited to cases in which the internal law allows only partial reparation to be made, not for the violation itself, but for the consequences of the decision or measure in question which has been held to breach the obligations laid down in the Convention’.<sup>17</sup>

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12 Charter of Fundamental Rights of the European Union (2000/C 364/01).

13 Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

14 Article 4 para. 1 GDPR.

15 Recital 14 and 27 GDPR.

16 ECmHR, Lawlor v. the United Kingdom, application no. 12763/87, 14 July 1988.

17 ECmHR, Taura and others v. France, application no. 28204/95, 4 December 1995.

- The ECtHR will also not receive an *actio popularis*, a case brought up by a claimant or a group of claimants, not to protect their own interests, but to protect those of others, or of society as a whole. ‘The Court reiterates [] that the Convention does not allow an *actio popularis* but requires as a condition for exercise of the right of individual petition that an applicant must be able to claim on arguable grounds that he himself has been a direct or indirect victim of a violation of the Convention resulting from an act or omission which can be attributed to a Contracting State’.<sup>18</sup>
- Furthermore, applications are rejected if the injury claimed following from a specific privacy violation is not sufficiently serious, even although it does fall under the scope of Article 8 ECHR. The *de minimis* rule in the ECHR provides that a claim will be inadmissible if ‘the applicant has not suffered a significant disadvantage’.<sup>19</sup>
- Finally, what distinguishes the right to privacy from other rights under the Convention, such as the freedom of expression, is that it only provides protection to individual interests. While the freedom of expression is linked to personal expression and development, it is also connected to societal interests, such as the search for truth through the market place of ideas and the well-functioning of the press, a precondition for any liberal democracy. By contrast, Article 8 ECHR, only safeguards individual interests, such as autonomy, dignity and personal development. Cases that do not regard such matters, but concern group or societal interests, are typically rejected by the Court.<sup>20</sup>

8. To provide another example, the right to data protection is based on the notion of personal data, which is linked explicitly to the rights and interests of natural persons. At the time the GDPR became applicable, the EU also adopted a Regulation on the transfer of non-personal data (RTNPD).<sup>21</sup> This Regulation, in many respects, mirrors the GDPR. While the GPDR’s aim is both to provide protection to the interests of natural persons and to stimulate the free movement of personal data, the RTNPD only ‘aims to ensure the free flow of data other than personal data’.<sup>22</sup> Consequently, the RTNPD sets no restrictions on the processing of non-personal data; rather, it prohibits governments and discourages private organizations to lay down barriers for the free flow of non-personal data.

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18 ECtHR, ASSELBOURG et al. v. Luxembourg, application no. 29121/95, 29 June 1999.

19 Article 35 para. 3 (b) ECHR.

20 B. VAN DER SLOOT, *Privacy as Virtue* (Cambridge: Intersentia 2017).

21 Regulation (EU) 2018/1807 of the European Parliament and of the Council of 14 November 2018 on a framework for the free flow of non-personal data in the European Union.

22 Article 1 GDPR and Article 1 RTNPD.

Consequently, when data processing is based on non-personal or aggregated data, citizens cannot rely on their right to data protection.

9. This legal paradigm has worked well for decades, in which most interferences were targeted at individuals or small groups, such as when the police wire-tapped a person's communications, entered her home in the course of a crime investigation or performed body cavity searches in designated risk areas. These are all matters where the effects of an action are limited to one person or a small group of persons. The question is whether this approach can hold in the age of Big Data, in which data are not so much gathered about a specific person or small group (for example those suspected of having committed a particular crime), but about an undefined number of people during an undefined period of time, often without a pre-established reason; in which data, even if they are originally linked to specific persons, are subsequently processed on an aggregated level in order to find statistical correlations and data patterns; and in which these insights are used for purposes of decision-making and developing policies on a group or societal level.

10. Under these circumstances, it becomes more and more difficult for an individual to establish a specific personal interest and demonstrate personal harm. The more conventional privacy violations (house searches, telephone taps, etc.) are clearly demarcated in time, place and person and the effects are therefore relatively easy to define, while large scale data processing operations often form an integral and permanent part of daily activities. In addition, while the victims were mostly aware of the fact that their privacy had been breached, in the current technological environment, the individual is often simply unaware of the fact that her personal data are gathered by either her fellow citizens (e.g., through the use of their smartphones), by companies (e.g., by tracking cookies) or by governments (e.g., through covert surveillance). Even if a person would be aware of all data processing operations by the approximately 5.000 organizations that have personal data on the average citizen, given the fact that data gathering and processing is so widespread and omnipresent, it will be next to impossible for her to keep track of every data process which includes (or might include) her data, to assess whether the data controller abides by the legal standards applicable, and if not, to file a legal complaint.

11. With large scale data operations, the problem is often not that any particular person has been affected, or that her specific interests have been harmed, but that large groups or society as a whole are affected and that their combined or aggregated interests are undermined. For example, the problem with the mass surveillance programs by the National Security Agency (NSA) or with Closed-circuit television (CCTV) cameras hanging on the corner of every street in increasingly many cities is not that specific individuals are affected, rather they trigger the structural question of how power is used and what impact such large scale data



gathering initiatives have on the rule of law. Likewise, the core concerns over the creation and fairness of data profiles revolve around group and societal interests. Obviously, if a specific individual is discriminated against on the basis of a general profile, this has an impact on her individual interests and she can invoke her subjective rights - but the problem of a bias in the profile itself and the fact that policies are based on such profiles are not linked to such interests and cannot be addressed by relying on subjective rights.

12. This leads to the final example of how the technological developments challenge the fundamentals of the current legal paradigm, namely that the distinction between personal and non-personal data is increasingly superfluous, as the nature of data is increasingly volatile. A dataset that contains ordinary personal data may be linked to and enriched by another dataset and transformed into a set that contains sensitive data; the data may then be aggregated or stripped from their identifiers and become non-personal data; subsequently, the data may be deanonymized or integrated into another dataset containing personal data. These subsequent steps may happen in a split second.<sup>23</sup> In addition, while the underlying rationale for providing protection to personal data and not to non-personal data is that the first may have an effect on citizens, while the second will not, the opposite is true in the Big Data era. Although Big Data processes revolve around processing large scale datasets on an aggregated level and producing statistical correlations, patterns and profiles, the general and systemic effects of both the data gathering and the policies based on data analytics can be significant.

13. The effects of processing non-personal, aggregated and/or metadata can be as big or even bigger than when organizations rely on the processing of personal data, while such consequences remain largely unaddressed in the current legal paradigm. For example, when the police, relying on tools for predictive policing, patrols a certain neighbourhood more intensively than others, such concerns the processing of data on the level of postal codes only and does not fall under the material scope of the GDPR. Similarly, if insurance companies decide to market their better priced products only in affluent areas, because they believe that the inhabitants of those areas will use their insurances less often than those living in other areas, such does not involve the processing of personal data. Or when a loud irritating noise is transmitted in a smart city in case three or more men of the age between 25-35 are standing in the proximity of 1 meter of each other after 11 PM, no personally identifying information needs to be processed in order for a smart computer to automatically adopt such measures.

14. Consequently, EU law does not address many of the modern data-processing initiatives involving large data sets, because it either refers to personal data, which

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23 L. TAYLOR, L. FLORIDI & B. VAN DER SLOOT (eds), *Group Privacy* (Brussels: Springer 2017) p 284.

are strictly regulated, or to non-personal data, which are left unregulated intentionally. This means that if a citizen, a group or a legal person (e.g., a civil society organization wanting to defend societal interests through legal means), relies on EU regulation, either at national level or before the EU Court of Justice, the claim will most likely be declared inadmissible or dismissed on its merits, as the claimant is unable to demonstrate any personal harm or detriment to individual interests. This also means that under the dominant approach of the ECtHR, such cases will be declared inadmissible as well when claimants rely on their right to privacy under Article 8 ECHR.

### **3. Quality of Life: Clean and Healthy Living Environment**

15. A solution for the gap between the traditional privacy paradigm and the enfolding technological reality can be found in a relatively new doctrine in the jurisprudence of the ECtHR: the ‘quality of life’. This notion was first introduced when the Court was faced with questions revolving around the right to a healthy living environment under Article 8 ECHR. It did so because it was faced with almost the exact same difficulties as those discussed with respect to Big Data processes. For example, environmental harm, such as following from carbon emissions, smog or radiation, do not affect specific persons, but large groups or society as a whole; consequently, the interests at stake are mostly societal rather than individual. In addition, it is difficult to substantiate a causal link between environmental pollution and potential personal harm; it is almost impossible to prove that a lung condition was caused by the smog of a factory in a radius of three kilometres of a person’s home, especially when there is more than one factory in the area and when, for example, there is air pollution due to quasi-permanent traffic jams. Furthermore, individuals are often unaware of smaller and more systematic forms of environmental pollution; and even if they are, given the many organizations that negatively impact an individual’s health, it is near impossible for her to assess each and every potential environmental threat and the effect that it might have on her private life. To solve these problems, the ECtHR has introduced the notion of ‘quality of life’.

16. The first time in which the term ‘quality of life’ was used by the Court was in the case of *Powell and Rayner v. the United Kingdom* (1990), which regarded the disturbance of the applicants’ private and family life due to the noise nuisance of the flying airplanes from the airport in the vicinity of their home. It should be noted that environmental cases had until then not been treated under the scope of Article 8 ECHR, but rather under Articles 2 (Everyone’s right to life shall be protected by law) and Article 3 ECHR (No one shall be subjected to torture or to inhuman or degrading treatment or

punishment), namely as a matter relating to bodily and psychological safety and integrity.<sup>24</sup> The first question that arose was thus whether Article 8 ECHR applied to the case *ratione materiae*, that is, whether the matter fell under the material scope of the right to privacy. The United Kingdom argued, moreover, that Article 8 ECHR was restricted to vertical relationships. The facts of the case, according to the government, disclosed no direct interference by a public authority, as Heathrow Airport and the aircraft using it were not and never had been owned, controlled or operated by the state or any governmental agency. Finally, it argued that this case did not concern a negative obligation, namely not to abuse its powers, but a positive obligation to ensure respect by other parties for the right to privacy, which it felt should not fall under the scope of the right to privacy. The Court responded to these claims by simply holding that in ‘each case, albeit to greatly differing degrees, the quality of the applicant’s private life and the scope for enjoying the amenities of his home have been adversely affected by the noise generated by aircraft using Heathrow Airport. Article 8 ECHR is therefore a material provision in relation to both Mr Powell and Mr Rayner’.<sup>25</sup>

17. The Court introduces the term ‘quality of life’ in order to accept the case under the scope of Article 8 ECHR; it acknowledges that it is not the applicants’ private life as such which has been infringed, but the quality of it that has diminished. Although noise nuisance does not directly intrude in someone’s personal life, it may diminish the enjoyment of it, among others, because of sleep deprivation. Consequently, the term ‘quality of life’ is related to, but at the same time broader than, the concept of private life. Although the ECtHR found no violation of the right to privacy in this case, it did accept a positive obligation for states to protect the ‘quality of life’ of its citizens, even in horizontal relationships, which paved the way for a wide variety of environmental cases under Article 8 ECHR, such as with regard to radiations and vibrations emitted by a transformer,<sup>26</sup> electro smog,<sup>27</sup> fumes and noise nuisance by nuclear power plants in a rural area<sup>28</sup> and by nightclubs.<sup>29</sup>

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24 ECmHR, *X. v. Germany*, application no. 7407/76, 13 May 1976. R. Desgagne, ‘Integrating Environmental Values Into the European Convention on Human Rights’, *Am. J. Int’l L. (American Journal of International Law)* 1995, pp 89-263.

25 ECtHR, *POWELL and RAYNER v. the United Kingdom*, application no. 9310/81, 21 Feb. 1990, para. 40. See further: R. Desgagne, ‘Integrating Environmental Values into the European Convention on Human Rights’, 89. *Am. J. Int’l L. (The American Journal of International Law)* 1995(2).

26 ECtHR, *MORCUENDE v. Spain*, application no. 75287/01, 6 September 2005.

27 ECtHR, *LUGINBUHL v. Switzerland*, application no. 42756/02, 17 January 2006.

28 ECmHR, *SPIRE v. France*, application no. 13728/88, 17 May 1990.

29 ECtHR, *MORENO GOMEZ v. Spain*, application no. 4143/02, 16 November 2004. ECtHR, *VILLA v. Italy*, application no. 36735/97, 14 November 2000.

18. In *López Ostra v. Spain* (1994), which regarded inhabitants of Lorca, which had a heavy concentration of leather industries, the Court continued its use of the concept of ‘quality of life’. Several tanneries there had a plant for the treatment of liquid and solid waste built, which released gas fumes, pestilential smells and contamination, which according to the applicant, caused health problems and nuisance to many Lorcans. Although the municipality undertook action and ordered a partial shutdown, the Court accepted that the applicant and her family lived for years only twelve meters away from a source of smells, noise and fumes and could therefore be said to be a victim. When the Government disputed that the situation had any significant impact on the applicant’s health and private life, the Court noted that at the national level, it had been accepted ‘that, without constituting a grave health risk, the nuisances in issue impaired the quality of life of those living in the plant’s vicinity, but it held that this impairment was not serious enough to infringe the fundamental rights recognized in the Constitution. Naturally, severe environmental pollution may affect individuals’ well-being and prevent them from enjoying their homes in such a way as to affect their private and family life adversely, without, however, seriously endangering their health’.<sup>30</sup>

19. The Court not only accepted the case under the scope of the right to privacy, it also accepted that the situation complained of did have a significant impact on the ‘quality of life’ of the applicant, even though there might not have been any significant impact on the applicant’s health. This case makes it clear that the problem related to environmental cases under the scope of the right to privacy is dual. First (*ratione materiae*), the question is how it relates to any of the terms contained in Article 8 ECHR, such as a person’s private and family life or the protection of home. The noise nuisance, for example, seems only remotely related to the protection of the home, which was originally intended to protect the individual against unlawful entry by the state, or to the protection of a person’s private life, which originally also primarily regarded the negative freedom not to be disturbed by the state in one’s personal dealings. Second (*ratione personae*), the causal relationship between the objectively determinable impact of actions on the environment and the damage or harm done to a specific applicant is often difficult to establish. For example, the connection between fumes and smog and health problems is often impossible to establish as a multitude of factors could have led to or caused a specific medical condition. Likewise, the relationship between noise pollution and sleep deprivation is often impossible to verify on an individual basis.

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30 ECtHR, *LÓPEZ OSTRA v. Spain*, application no. 16798/90, 9 December 1994, § 50. See further: S. F. LEROY, ‘Can the Human Rights Bodies be Used to Produce Interim Measures to Protect Environment-Related Human Rights?’, *Review of European Community & International Environmental Law* 2006(15), p 1.

20. It is against this background that the Court has introduced the concept of ‘quality of life’. This notion not only provides a new and substantially broader ground (*ratione materiae*) on which applicants can rely when invoking Article 8 ECHR, because it is a very subjective notion, as what diminishes a person’s quality of life is to be determined in the first place by the person herself, it can also be used to circumvent difficulties over establishing a causal link between actions of third parties and harm suffered by the applicant (*ratione personae*). The capacity of the ‘quality of life’ to function as a double-edged sword can be witnessed, *inter alia*, in the case of *Hatton and others v. the United Kingdom* (2003), which concerned noise pollution caused by a new airport flying scheme, and in which the Court held that it had no doubt that the scheme ‘was susceptible of adversely affecting the quality of the applicants’ private life and the scope for their enjoying the amenities of their respective homes, and thus their rights protected by Article 8 of the Convention’. ‘It is true’, it went on, ‘that the applicants have not submitted any evidence in support of the degree of discomfort suffered, in particular they have not disproved the Government’s indications as to the “objective” daytime noise contour measured at each applicant’s home. However, as the Government themselves admit, and as is evident from the 1992 sleep study on which they rely, sensitivity to noise includes a subjective element, a small minority of people being more likely than others to be woken or otherwise disturbed in their sleep by aircraft noise at night. The discomfort caused to the individuals concerned will therefore depend not only on the geographical location of their respective homes in relation to the various flight paths, but also on their individual disposition to be disturbed by noise’.<sup>31</sup> Consequently, although the objectively measured noise levels fell well below the established thresholds, the Court accepted that the applicants could claim to have been substantially harmed, because it could not be excluded that they suffer to a greater extent from noises than an average person would, without any evidence provided to back that point up.

Likewise, in *Fadeyeva v. Russia* (2005), the government stressed that there was no evidence that the applicant’s private life or health had somehow been adversely affected by the operation of the steel plant in the vicinity of her home. Although the applicant was diagnosed with a disease, it pointed out that such could have been caused by the applicant’s job in a hazardous industry, her duties consisting, among others, of covering tubing and other industrial equipment with thermo-insulating materials. The Court, faced with the difficulty of establishing harm and especially the causal relationship between the damage and the pollution complained of, reiterated at the outset that, in assessing evidence, the general principle has been to apply the standard of proof ‘beyond reasonable doubt’. But

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31 ECtHR, *HATTON and others v. the United Kingdom*, application no. 36022/97, 8 July 2003, § 118. See further: R. K. M. SMITH, ‘*HATTON v. United Kingdom*. App. No. 36022/97’, *Am. J. Int’l. L. (The American Journal of International Law)* 2002(96), p 3.

the Court stressed the need to allow flexibility in this respect, taking into consideration the nature of the substantive right at stake and any evidentiary difficulties involved.<sup>32</sup> The Court acknowledged that there was neither any prove of a causal relationship between the environmental pollution and the health issues of the applicant, nor was there specific evidence to point out that the applicant had suffered to a greater extent than other persons living in the neighbourhood (the element of individualizability and substantial harm, which seemed to be decisive in the Hatton case, as at least on a subjective level, it could not be excluded that the applicants suffered more from noise pollution than the average person did). Still, the Court observed that over a significant period of time the concentration of various toxic elements in the air near the applicant's home seriously exceeded the maximum permissible limits (MPLs), and stressed:

The Russian legislation defines MPLs as safe concentrations of toxic elements. Consequently, where the MPLs are exceeded, the pollution becomes potentially harmful to the health and well-being of those exposed to it. This is a presumption, which may not be true in a particular case. The same may be noted about the reports produced by the applicant: it is conceivable that, despite the excessive pollution and its proved negative effects on the population as a whole, the applicant did not suffer any special and extraordinary damage. In the instant case, however, the very strong combination of indirect evidence and presumptions makes it possible to conclude that the applicant's health deteriorated as a result of her prolonged exposure to the industrial emissions from the Severstal steel plant. Even assuming that the pollution did not cause any quantifiable harm to her health, it inevitably made the applicant more vulnerable to various illnesses. Moreover, there can be no doubt that it adversely affected her quality of life at home. Therefore, the Court accepts that the actual detriment to the applicant's health and wellbeing reached a level sufficient to bring it within the scope of Article 8 of the Convention.<sup>33</sup>

Consequently, referring to a combination of indirect evidence and presumptions, is the Court was willing to accept the case under the right to privacy.

23. To provide a final example of the remarkable role the notion of 'quality of life' has played in the jurisprudence of the ECtHR, reference can be made to the case of *Ledyayeva and others v. Russia* (2006), in which the applicants complained that there had been a violation of Article 8 on account of the government's failure

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32 ECtHR, FADEYEVA v. Russia, application no. 55723/00, 9 June 2005, § 79. See further: D. Papadopoulou, 'Environmental Calamities and the Right to Life', *Env't'l L. Rev. (Environmental Law Review)* 2006(8), p 1.

33 ECtHR, FADEYEVA v. Russia, application no. 55723/00, 9 June 2005, § 87-88.

to protect their private lives and homes from severe environmental nuisance arising from the industrial activities of a steel-plant. The government denied the existence of any significant pollution and the causal link to any infringement on the applicant's health or 'quality of life'. The Court was even more explicit about the subjective yardstick used when assessing harm in this context when it stressed that whereas 'in many cases the existence of an interference with a Convention right is evident and does not give rise to any discussion, in other cases it is a subject of controversy. The present four applications belong to this second category. There is no doubt that serious industrial pollution negatively affects public health in general. However, it is often impossible to quantify its effects in each individual case, and distinguish them from the influence of other relevant factors, such as age, profession etc. The same concerns possible worsening of the quality of life caused by the industrial pollution. The "quality of life" is a very subjective characteristic which hardly lends itself to a precise definition'.<sup>34</sup> Consequently, individual harm was accepted by virtue of an individual being a member of the general public and by virtue of environmental pollution having had a negative effect on public health in general.

#### 4. Quality of Life: Physical and Psychological Integrity

22. From protecting citizens against an unhealthy living environment, the Court has extrapolated its views on the quality of life to bodily integrity and matters falling in the medical sphere. Although cases concerning matters of bodily and psychological integrity fall somewhere in the intermediate zone between the right to privacy and the rights to life and to be free from inhuman and degrading treatment, the Court has consistently approached these issues from the perspective of Article 8 ECHR, again using in particular the notion of 'quality of life'.

23. For example, in the decision on the admissibility of the case in *Zehnalová and Zehnal v. the Czech Republic* (2002), the claimants relied on Articles 3, 8 and 14 (prohibition on discrimination) ECHR and submitted that a large number of public buildings in their home town were not accessible to them due to the first applicant's physical condition. Two questions arose. First, whether a positive obligation to make public buildings accessible for the physically handicapped could be derived from their rights to privacy and second, whether the first applicant and his relatives had suffered from a significant infringement on this right by the inaccessibility of the public buildings. The government argued that 'the applicants had failed to

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34 ECtHR, LEDYAYEVA, DOBROKHOTOVA, ZOLOTAREVA and ROMASHINA v. Russia, application no. 53157/99, 53247/99, 53695/00 and 56850/00, 26 October 2006, § 90. See further: M. FITZMAURICE, 'The European Court of Human Rights, Environmental Damage and the Applicability of Article 8 of the European Convention on Human Rights and Fundamental Freedoms', *13. Envtl. L. Rev.* 2011, p (107).

specify how the alleged situation had interfered with their private life<sup>35</sup> and suggested that the claim concerned social relations of such broad and indeterminate scope that no direct link was conceivable between the applicants' private life and the measures the government had been urged to take. Although the Court did not find a violation of a positive obligation of the state and held that the harm to the applicants was insufficient to fall under the scope of the Convention, it explicitly accepted that such social-economic complaints could significantly impact a person's 'quality of life' and fall under the scope of Article 8 ECHR.

24. The first time the Court did accept the notion of 'quality of life' as a standard in a matter falling in the medical domain was in *Pretty v. the United Kingdom* (2002), regarding the wish of the applicant to die by euthanasia. The Court rejected such a right could be inferred from Article 2 ECHR, even although it had held that the right not to be part of an association may be derived from Article 11 ECHR (freedom of association).<sup>36</sup> As to Article 3 ECHR, it argued that although the applicant might be suffering, there was no positive obligation for the government to put an end to that suffering and to assist the claimant in dying in a dignified manner. Turning to Article 8 ECHR, the problem, the Court acknowledged, is that the right to privacy can hardly be said to provide for protection of the right to die with assistance, which is when it introduced the concept of 'quality of life', stressing that 'the applicant is suffering from the devastating effects of a degenerative disease which will cause her condition to deteriorate further and increase her physical and mental suffering. She wishes to mitigate that suffering by exercising a choice to end her life with the assistance of her husband. As stated by Lord Hope, the way she chooses to pass the closing moments of her life is part of the act of living, and she has a right to ask that this too must be respected. The very essence of the Convention is respect for human dignity and human freedom. Without in any way negating the principle of sanctity of life protected under the Convention, the Court considers that it is under Article 8 that notions of the quality of life take on significance. In an era of growing medical sophistication combined with longer life expectancies, many people are concerned that they should not be forced to linger on in old age or in states of advanced physical or mental decrepitude which conflict with strongly held ideas of self and personal identity'.<sup>37</sup>

25. Like matters over environmental pollution discussed in the previous section, the 'quality of life' is used to broaden the scope of the right to privacy *ratione*

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35 ECtHR, *ZEHNALOVA and ZEHNAL v. the Czech Republic*, application no. 38621/97, 14 May 2002.

36 ECtHR, *YOUNG, JAMES and WEBSTER v. United Kingdom*, application nos. 7601/76 and 7806/77, 13 August 1981. ECtHR, *Sigurdura. Sigurjónsson v. Iceland*, application no. 16130/90, 30 June 1993.

37 ECtHR, *PRETTY v. the United Kingdom*, application no. 2346/02, 29 Apr. 2002, § 64-65. M. A. Sanderson, 'Pretty v. United Kingdom. App. No. 2346/02', 96. *Am. J. Int'l L. (American Journal of International Law)* 2002, p 4.



*personae*.<sup>38</sup> Objective medical data may give insight into a disease, but the extent to which this causes unbearable suffering and gives rise to the need to end one's life is difficult to objectively verify, as pain and anxiety are highly subjective feelings. Accepting this subjective notion of harm also means that the material (*ratione materiae*) scope of Article 8 ECHR was broadened to potentially include a right to a dignified end and having access to public buildings by physically disabled people.

26. These two aspects of the 'quality of life' has led the Court to turn to Article 8 ECHR when it wants to accept peripheral matters under the scope of the Convention, which is illustrated, among others, by the admissibility decision of *Pentiacova and 48 others v. Moldova* (2005), regarding the financing of medical treatment by the state. The applicants stressed that they had to (partially) pay for the treatment themselves and relied on Articles 2, 3, 6 (right to a fair trial), 13 (right to petition), 14 ECHR and 1 of the 1e Protocol (right to property). The Court, however, treated the case almost exclusively under the scope of Article 8 ECHR, stressing that although 'the applicants' representative asked the Court to discontinue the examination of the complaint under this Article, [] the Court considers it necessary to examine the complaints concerning insufficient State financing of haemodialysis and the local authorities' failure to cover the applicants' travelling expenses in the light of the right to respect for private life under Article 8 of the Convention'. The question whether Article 8 ECHR should be interpreted in a way that it provides protection from having to pay financial compensation for medical treatment was solved by the ECtHR by referring to the notion of 'quality of life', stressing that while the ECHR 'does not guarantee as such a right to free medical care, in a number of cases the Court has held that Article 8 is relevant to complaints about public funding to facilitate the mobility and quality of life of disabled applicants. The Court is therefore prepared to assume for the purposes of this application that Article 8 is applicable to the applicants' complaints about insufficient funding of their treatment'.<sup>39</sup>

27. The Court again decided to reinterpret the application on its own initiative, in its admissibility decision in *Mólka v. Poland* (2006), in which an applicant had complained under Article 6 ECHR, Article 3 of Protocol No.1 (Right to free elections) and Article 14 ECHR about the unfairness of the court proceedings and alleged that he had been deprived of his right to vote on account of his

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38 See further: ECtHR, *GLASS v. the United Kingdom*, application no. 61827/00, 18 March 2003. ECtHR, *SENTGES v. the Netherlands*, application no. 27677/02, 8 July 2003. ECtHR, *GLASS v. the United Kingdom*, application no. 61827/00, 9 March 2004. ECtHR, *TYSIAC v. Poland*, application no. 5410/03, 20 March 2007. ECtHR, *HAAS v. Switzerland*, application no. 31322/07, 20 January 2011.

39 ECtHR, *PENTIACOVA and 48 others v. Moldova*, application no. 14462/03, 4 January 2005.

disability and the inaccessibility of various facilities. The Court held that these claims were all incompatible with the Convention *ratione materiae*, but continued to hold that ‘in respect of the applicant’s allegation that he was deprived of his right to vote on account of his disability, the Court raised of its own motion a complaint under Article 8 of the Convention’. The question whether a case in which a disabled person was hindered in voting falls under the right to privacy (*ratione materiae*), which seems quite far removed from its original meaning of Article 8 ECHR and indeed seems intuitively linked more directly to the right to free elections, is answered affirmatively by the Court by referring to the notion of ‘quality of life’, pointing out that in a number of cases it had already held ‘that Article 8 is relevant to complaints about public funding to facilitate the mobility and quality of life of disabled applicants. More generally, the Court observes that the effective enjoyment of many of the Convention rights by disabled persons may require the adoption of various positive measures by the competent State authorities’.<sup>40</sup>

28. *R.R. v. Poland* (2011) concerned a case in which a mother feared that the ‘quality of life’ of her future child could be seriously affected by a potential genetic defect. The mother hoped to get an abortion but was prevented from doing so, among others, due to a lack of information regarding the existence of the defect. Here, again, a dual problem arose. First, the question is whether the right to abortion and a right to information facilitating that choice is implicit in the notion of respect for private and family life (*ratione materiae*).<sup>41</sup> Perhaps more importantly, second (*ratione personae*), the person directly affected by the disease or defect is the unborn baby, the mother is at most an indirect victim. Moreover, the claim is mostly hypothetical as it is unsure whether a child will indeed suffer from a health condition, and even if it is, it is difficult to assess how this might (negatively) impact the mother’s life. Again, the Court took recourse to the notion of quality of life to solve these problems when it stressed “that during pregnancy the foetus’ condition and health constitute an element of the pregnant woman’s health. The effective exercise of this right is often decisive for the possibility of exercising personal autonomy, also covered by Article 8 of the Convention by deciding, on the basis of such information, on the future course of events relevant for the individual’s quality of life (e.g., by refusing consent to medical treatment or by requesting a given form of treatment”).<sup>42</sup> Doing so, the Court transferred

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40 ECtHR, *MOLKA v. Poland*, application no. 56550/00, 11 April 2006.

41 ECmHR, *BRÜGGEMANN and SCHEUTEN v. Germany*, application no. 6959/75, 19 May 1976.

42 ECtHR, *R.R. v. Poland*, application no. 27617/04, 26 May 2011, § 197. See further: E. J. Ireland, ‘Do Not Abort the Mission: An Analysis of the European Court of Human Rights Case of *R.R. v. Poland*’, 38. *North Carolina Journal of International Law & Commercial Regulation* 2013, p 651.

the concerns over the ‘quality of life’ of the future baby, to the harm to ‘quality of life’ of the mother herself.<sup>43</sup>

## 5. Quality of Life: Protection of Minorities and Weaker Groups

29. To give a final example of how prominent the notion of ‘quality of life’ has become, functioning as a double-edged sword in the hands of the Court, reference can be made to various cases brought under the Convention concerning the protection of minorities and weaker groups.<sup>44</sup> An illustration may be found in cases revolving around the recognition of transsexuals’ new gender and identity by the government. Such claims seem most directly related to the scope of Article 12 ECHR (Men and women of marriageable age have the right to marry and to found a family), because one of the problems transsexuals typically face is that because of their being registered as of a particular gender, combined with the prohibition on gay marriages, they often are not allowed to marry someone of the opposite sex according to their newly adopted gender (the right to marry), which may also have consequences for the right to adoption (founding a family). Nevertheless, the Court typically deals with such matters under the scope of the right to privacy, referencing the ‘quality of life’.

30. An additional reason for utilizing this concept is that in these types of cases, it is often difficult to establish precisely what impact the fact that a person is not officially acknowledged by the state as being a person of the newly adopted gender has on her private life. This dilemma was faced by the Commission, *inter alia*, in the cases of *Sheffield* (1997) and *Horsham* (1997), both against the United Kingdom, in which the applicants claimed that there were biological and medical data to show that transsexuals have a different brain structure and consequently, that they were falsely seen as being of a certain gender as registered in the birth register. The Commission did not accept this as objective evidence or ‘prove’ for the necessity of accepting transsexualism and the need for official acknowledgment of gender change, as the data referred to by the applicants were far from conclusive. Instead, it referred to the fact ‘that the medical profession has reached a consensus that transsexualism is an identifiable medical condition, gender dysphoria, in respect of which gender re-assignment treatment is ethically permissible and can be recommended for the purpose of improving the quality of life. As a result, the treatment is not only accessible, but provided by State medical

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43 See further other cases: ECmHR, *JOHAL, SINGH and SINGH v. the United Kingdom*, application no. 27299/95, 4 March. 1998. ECmHR, *Z. v. Finland*, application no. 22009/93, 2 December 1995. ECtHR, *Z. v. Finland*, application no. 22009/93, 25 February 1997. ECtHR, *D. v. the United Kingdom*, application no. 30240/96, 2 May 1997. ECtHR, *Hristozov and others v. Bulgaria*, application nos. 47039/11 and 358/12, 13 November 2012.

44 See also ECtHR, *MODINOS v. Cyprus*, application no. 15070/89, 22 April 1993.

establishments in a number of the Contracting States of the Council of Europe. In these circumstances, a certain social reluctance to accept, or suspicion of, the phenomenon of transsexualism and difficulties in assimilating it readily into existing legal frameworks cannot, in the Commission's view, be of decisive weight'.<sup>45</sup>

31. The Court also turned to the notion of 'quality of life' and used it to extent the scope of the right to privacy in the case of *L. v. Lithuania* (2007), in which the applicant complained under Article 3 of the Convention that he had been unable to complete gender reassignment surgery owing to the lack of legal regulation. The Court, however, thought that the level of discomfort was not sufficient to bring the case under the scope of this provision, holding that 'an examination of the facts of the present case, whilst revealing the applicant's understandable distress and frustration, does not indicate circumstances of such an intense degree, involving the exceptional, life-threatening conditions found in the cases of Mr D. and Mrs Pretty cited above, as to fall within the scope of Article 3 of the Convention. The Court considers it more appropriate to analyse this aspect of the applicant's complaint under Article 8 (respect for private life) below'.<sup>46</sup> The Court emphasized that there is a positive obligation upon states to ensure respect for private life, included the respect for human dignity and the 'quality of life', which the Court found the government violated in this case, because of the distressing uncertainty regarding the recognition of the applicant's true identity.<sup>47</sup>

32. In subsequent case law, the term 'quality of life' reappears in a number of cases regarding groups the Court feels are in need of special protection, such as when a number of Roma complained that the refusal of a planning permission to

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- 45 ECmHR, *HORSHAM v. the United Kingdom*, application no. 23390/94, 21 January 1997, § 54. ECmHR, *SHEFFIELD v. the United Kingdom*, application no. 22985/93, 21 January 1997, § 53. See further: ECtHR, *SHEFFIELD and HORSHAM v. the United Kingdom*, application nos. 22985/93 and 23390/94, 30 July 1998. ECtHR, *H. v. Finland*, application no. 37359/09, 13 November 2012. S. Cowan, "'Gender is no substitute for Sex'", *Feminist Legal Studies*, 2005(13), p 1. A. Mowbray, 'An Examination of the European Court of Human Rights' Approach to Overruling its Previous Case Law', *Human Rights Law Review*, 2009(9), p 2; P. Johnson, 'Heteronormativity and the European Court of Human Rights', *Law Critique*, 2012(23), p 1. See for the relationship between Strasbourg and Luxembourg: H. Stalford, 'Concepts of Family Under EU Law - Lessons From the ECHR', *International Journal of Law, Policy and the Family* 2002(16), p 3.
- 46 ECtHR, *L. v. LITHUANIA*, application no. 27527/03, 11 September 2007, § 47. See further: T. Birmontienė, 'The Development of Health Law as a Way to Change Traditional Attitudes in National Legal Systems. The Influence of International Human Rights Law: What Is Left for the National Legislator?', *European Journal of Health Law* 2010(17), p 1.
- 47 ECtHR, *L. v. LITHUANIA*, application no. 27527/03, 11 September 2007, § 56. See also ECtHR 11 July 2002, appl.no. 28957/95 (Goodwin/UK). ECtHR 11 July 2002, appl.no. 25680/94 (L/UK). See with regard to Goodwin and I also: S. Cowan, "'Gender is no substitute for Sex": A Comparative Human Rights Analysis of the Legal Regulation of Sexual Identity', *Feminist Legal Studies* 2005(13), p 2.

station caravans on a certain piece of land disclosed a violation of Article 8 of the Convention.<sup>48</sup> While the Court acknowledges that this is a matter going beyond the scope normally accorded to respect for home, private life and family life under Article 8 ECHR, referring, *inter alia*, to their quality of life, it has been willing to include certain minority rights and the protection of minority life styles under the scope of the right to privacy.<sup>49</sup> And while the concrete effects a particular affair may have on a person's or group's ethnic identity and minority lifestyle is a very subjective matter, which must be determined from the perspective of the applicant or the applicant's minority group, the Court has accepted that states may be under a positive obligation to ensure respect and facilitate the development of minority identities.<sup>50</sup>

33. To provide a final example, the Court has also used the term 'quality of life' to accept a positive obligation for the government to ensure the safety of its citizens, such as in the case of *Georgel and Georgeta Stoicescu v. Romania* (2011), where, relying on Articles 3 and 8 ECHR, the applicants complained of the attack by a pack of stray dogs, submitting that harm was caused by the failure of the authorities to implement adequate measures against the numerous stray dogs in Bucharest, which were a danger for the safety of the inhabitants. The question arose whether there is a positive obligation for governments to provide citizens protection from stray dogs and, if so, under which provision under the Convention. Instead of pointing to the right to life or the right to bodily integrity, the Court referred to the notion of 'quality of life' and decided to deal with the case under the right to privacy, Article 8 ECHR.<sup>51</sup> This was extrapolated in *Dorđević v. Croatia* (2012), regarding a mentally and physically disabled son and his mother, who argued that the lack of governmental protection of the son from harassment by children living in their neighbourhood, violated Articles 2, 3 and 8 ECHR. The Court found a violation of Article 3 ECHR in respect of the son and also considered whether there existed a violation of Article 8 ECHR with regard to the mother. On that point, the Court stressed that it had 'previously held, in various contexts, that the concept of private life includes a person's psychological integrity. Under Article 8, States have in some circumstances a duty to protect the moral integrity of an

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48 ECtHR, *COSTER v. the United Kingdom*, application no. 24876/94, 18 January 2001. ECtHR, *BEARD v. the United Kingdom*, application no. 24882/94, 18 January 2001. ECtHR, *LEE v. the United Kingdom*, application no. 25289/94, 18 January 2001. ECtHR, *CHAPMAN v. the United Kingdom*, application no. 27238/95, 18 January 2001. ECtHR, *JANE SMITH v. the United Kingdom*, application no. 25154/94, 18 January 2001. See further: Y. Donders, 'Do Cultural Diversity and Human Rights Make a Good Match?', *International Social Science Journal* 2010(61), p 199.

49 ECtHR, *CHAPMAN v. the United Kingdom*, application no. 27238/95, 18 January 2001, § 73.

50 ECtHR, *AKSU v. Turkey*, application no. 4149/04 & 41029/04, 27 July 2010. ECtHR (Grand Chamber), *AKSU v. Turkey*, application no. 4149/04 & 41029/04, 15 March 2012.

51 ECtHR, *GEORGEL and GEORGETA STOICESCU v. Romania*, application no. 9718/03, 26 July 2011, § 45.

individual from acts of other persons. The Court has also held that a positive obligation exists upon States to ensure respect for human dignity and the quality of life in certain respects'.<sup>52</sup> Subsequently, it considered that there was a violation in this case of Article 8 ECHR, because the ongoing harassment had substantially and negatively affected the mother's 'quality of life'.

## 6. Quality of Life: Privacy in the Big Data Era

34. This article started out by painting the picture of recent developments in data-driven applications, Big Data and Artificial Intelligence. Section 2 explained how and why there is an incongruity with the current privacy paradigm, that under its dominant interpretation, is unsuitable to address many of the problems that arise in the data-driven environment. In short, the current privacy paradigm is predominantly focussed on providing relief to natural persons when they can substantiate that they have been harmed directly and individually by a concrete effect of a data driven application, while most effects do not result in concrete, specific and individualizable harm. Subsequently, this article turned to a discussion of the concept of 'quality of life', which the ECtHR has developed in cases concerning environmental issues (section 3), the protection of physical and psychological integrity (section 4) and the protection of minorities (section 5).<sup>53</sup>

40. The use of the 'quality of life' concept by the Court symbolizes what critics have long warned about: the ECtHR has extended the scope of the Convention rights to such an extent that almost anything is deemed a 'human right' and almost any limitation is seen as an 'interference'. The only real limit on the unprecedented expansion of human rights realm no longer lies in the preliminary questions as to the scope of the Convention rights (*ratione personae* and *ratione materiae*), but in the question whether the limitation of a human right is legitimate according to, inter alia, paragraphs 2 of Articles 8, 9, 10 and 11 ECHR. Adopting this approach, critics have argued, renders human rights meaningless. If everything is a human right, it no longer bears any significance to have a human right. It is clear that the cases in which the Court uses the 'quality of life' criterion fits that trend. Consequently, it is by no means uncontroversial what the ECtHR has done in the cases discussed in this article, but given that the Court is unlikely to put a hold to the expansion of the human rights realm, this section will argue that the doctrine of

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52 ECtHR, ĐORĐEVIĆ v. Croatia, application no. 41526/10, 24 July 2012, § 152. See further: D. TZIOLA, 'Is Disability Harassment Inhuman Treatment? App. No 41526/10 (European Court of Human Rights)', *Int. J. Human Rights and Constitutional Studies* 2013(1), p 2.

53 See also ECtHR, MORENO GOMEZ v. Spain, application no. 4143/02, 16 November 2004. ECtHR, GIACOMELLI v. Italy, application no. 59909/00, 2 November 2006. ECtHR, FÄGERSKIÖLD v. Sweden, application no. 37664/04, 26 November 2008. ECtHR, BORYSIEWICZ v. Poland, application no. 71146/01, 1 July 2008. ECtHR, WALKUSKA v. Poland, application no. 6817/04, 29 April 2008. ECtHR, GRIMKOVSKAYA v. Ukraine, application no. 38182/03, 21 July 2011.

‘quality of life’ could have a positive effect when applied to the domain of data processing, as it could solve some of the lacunas in the current privacy paradigm.

36. First, the problem with harm following from large scale data-driven operations is that people often do not know that they have been affected. They are simply unaware that their data have been gathered by intelligence agencies or by companies through the use of cookies, or are oblivious of the fact that they are being nudged in smart cities, as data collection is a structural and invisible part of the environment. Consequently, natural persons will rarely submit a privacy claim, because they do not know that they have been harmed. The concept of quality of life may provide a partial solution on this point. The ECtHR was faced with the same problem in environmental cases. People often do not know that there is environmental pollution and/or that their life is affected by it, *inter alia* because air pollution need not be visible and because pollution has simply become intrinsic to people’s the living environment. That is why the Court has imposed on governments a positive duty to inform citizens of those effects and the potential impact on their quality of life.<sup>54</sup>

37. Second, obviously, the argument could be that the GDPR already requires of parties to inform data subjects of the fact that their data are processed. However, as explained in section 2, data-driven applications using Big Data, Artificial Intelligence (AI) and profiling techniques often do not rely on personal data, but make use of general data, statistical information and group profiles. The quality of life criterion might be used as a solution on this point, because governments would have an obligation to inform citizens about the fact that data-driven applications might impact their quality of lives, even when no personal data would be gathered or when personal data of other persons than the person on which an application has an effect were used.

38. Third, the law generally requires that the person filing a complaint is able to demonstrate an interest that can be distinguished from the amorphous mass, whereas systemic and large scale data-driven operations often do not give rise to an individualizable interest. They simply affect everyone or large groups in society. Cameras on the corner of virtually every street in cities, for example, do not affect anyone specifically and personally: they film everyone, anywhere and anytime. The same applies to mass surveillance practices. No one is affected individually, everyone is. Again, the ‘quality of life’ doctrine might offer a solution, as in some cases where it has already utilized this notion, the Court has accepted without any evidence to that fact that applicants belonged to a minority that suffered more from certain environmental pollution (e.g., noise caused by night flights) than the average or normal person, and that consequently, there was individualizable harm.

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54 [https://www.echr.coe.int/Documents/Research\\_report\\_health.pdf](https://www.echr.coe.int/Documents/Research_report_health.pdf).

In this vein, persons may claim that camera's filming them in smart cities harms them more than others, for example because they simply care about privacy more than the average person.

39. Fourth, the privacy regime requires that individuals can quantify their harm, even if it concerns immaterial damage. Such, however, is not always easy to quantify with respect to data-driven harms. Exactly what kind of damage was done to an applicant by a data leak, by having been nudged, by having been stopped and searched by the police on the basis of predictive policing, etc., is difficult to estimate and substantiate. Again, the quality of life doctrine is used by the Court in cases where similar issues arise, and it uses this concept to allow claimants to rely on their subjective feelings as to what harm was done and how such should be remedied (e.g., whether a person is wrongly assigned to a certain gender is determined on the basis of a subjective feeling, rather than objective verification).

40. Fifth, the causality between the damage suffered and underlying cause must be demonstrated before a court of law. This may be difficult, because although individual detriment may be obvious, it is not easy to prove that it is the result of a general or systemic malpractice. Even if it is clear, for example, that predictive policing has an implicit racial bias, that does not mean that the body cavity searches performed on a specific person from a minority group was indeed illegitimate or unlawful: there may well have been good reasons to do so in her individual case. Again, the quality of life criterion is deployed by the ECtHR to solve similar issues in other cases. For example, it has accepted that a general statistical reality, such as that on average, peoples' health declines when exposed to environmental pollution, may be directly translated to an individual case, meaning that it accepted that a person's health condition was likely negatively affected by that environmental pollution, without further evidence to support that assumption.

41. Sixth, and related to this fact, with respect to data-driven incidents, there is often no single person or organization responsible for the matter complained of. Data flows and data-driven activities, such as within smart cities, predictive policing and data-driven profiling, are often an interplay between dozens of companies, intermediaries, governmental agencies, data brokers, cloud providers, etc. It is often unclear which party could be held accountable for which part of the process if something goes wrong. Again, similar issues have been dealt with by the ECtHR in environmental cases and turning to the notion of quality of life, it has stressed that although there might be multiple causes for one effect, one organization can simply be held accountable, even if it is not proven 'beyond reasonable doubt' that the organization's behaviour was either the *causa proxima* or a *conditio sine qua non* for the harm. In addition, the Court has made clear that the state can be held accountable for not protecting citizens' quality of life against interferences by private sector organizations, such as airports and industries.



42. Seventh, the current privacy paradigm only addresses harm that has already materialized. As explained in section 2, a-priori claims are in principle rejected by the Court. This means that the fact that people adjust their behaviour to prevent certain harm from materializing, e.g., avoid smart cities to prevent being subjected to intensive monitoring practices, are seldom taken into account by the ECtHR, while the chilling effect may be one of the gravest impacts of the data-driven environment. Importantly, the Court has stressed that the quality of life may not only be impacted by real and acute harm, but also by the fear for harm, for example that a child may be born with a genetic defect or the distressing uncertainty with respect to the question whether a person will be recognized in her newly adopted gender.

43. Eighth, and connected to this fact, many of the effects of the data-driven environment are not communicated to citizens, both due to the constellation raised in points one and two, and because in many cases there are legal exemptions from the obligation to be transparent, e.g., secret services do not have an obligation to inform people that they have been subjected to surveillance activities and businesses may invoke their right to protect business secrets when data subjects ask whether their data is included in the set of training data for the algorithm. Consequently, they do not know whether they have been harmed by a data practice. The ECtHR normally rejects hypothetical claims: claims by applicants that think they might have been harmed, but are unsure. However, it is willing to make an exception in cases in which it deploys the quality of life criterion, for example when it is unsure whether a child will indeed be born with a genetic effect. Again, applying this notion in cases revolving around the effects of the data-driven environment may provide a solution.

44. Ninth, this also means that the ECtHR is taking into account the interests of future generations and the unborn. Among others, it has accepted that states need to protect both the quality of life of unborn children and the quality of life of the mother, which is deeply connected with the quality of life of her unborn child. In the data-driven environment, one of the main concerns of many is not so much what is happening now, but how the current situation might impact their lives in the future and those of future generations. For example, the so called ‘Second World War’-argument poses the rhetorical question: what if the Nazi’s had access to all the data currently gathered and processed? The quality of life doctrine might be used to fill this legal lacuna.

45. To provide a final example of the merits of applying the quality of life criterion to the data-driven context, one of the problems encountered by individuals in the data-driven environment is not so much that there is direct harm, but that they are hampered in their individual development. Data-driven applications are mostly based on group profiles and statistical correlations; this means that people can be ‘caught’ in a certain profile (eg a person that is profiled as - rich,

right wing, conservative – will get according news selections, advertisements and search results, and hence be confirmed in an increasingly isolated world view). This has led to fears for filter bubbles, echo chambers and the Matthew effect, the latter being the effect that the poor will get poorer and the rich richer due to their being treated according to their profile and presumed characteristics. Again, it is difficult to address this problem under the dominant privacy paradigm; for example, what precisely is the problem of being shown an advertisement that suits a person’s presumed profile? Such will most likely not lead to a violation of Article 8 ECHR or of the GDPR. Again, the quality of life might provide an opening on this point, as the Court includes a wide variety of peripheral interests under this doctrine; everything that a person feels affects her quality of life is included under the scope of this doctrine *ratione materiae*. In addition, the Court has oftentimes used this doctrine with respect to cases in which claimants invoke harm to their personal development and protection of their sexual, cultural or minority identity and has stressed that the right of individuals to unfettered development of their personality is protected under Article 8 ECHR.

## 7. Conclusion: Link with the GDPR

46. The legal privacy and data protection paradigm is focused on the private individual on multiple accounts. It provides subjective claim rights to natural persons, in principle disallowing legal persons and groups to invoke these fundamental rights. Natural persons can rely on these rights if they believe the actions of others have had a negative effect on their private interests, such as those relating to human dignity, individual autonomy and personal freedom, but they are typically barred from invoking these rights when societal or group interests are at stake. Under the ECHR, natural persons can only complain about the conduct of governments, not that of private parties. In addition, when they invoke personal harm, they should be able to demonstrate that such harm is individualizable and substantial, because claims about minor individual effects are declared inadmissible by the ECtHR. Furthermore, applicants must be able to demonstrate a causal relationship between the harm suffered by them and the actions or inactions of their national government.

47. In the Big Data era, this approach is increasingly difficult to uphold, because while traditional privacy infringements were targeted at individuals or small groups, large scale data operations gather data about an undefined number of people during an undefined period of time, often without a pre-established reason. Although they may be personal data legally speaking when gathered, when subsequently processed and analysed, in order to produce profiles, statistical correlations and data patterns through the use of algorithmic analytics, they are aggregated and thus de-individualized. In addition, the policies based on those insights typically affect large groups or have an impact on society as a whole, which means not only that group and societal interests are typically at stake, but also that to the extent a person points to her individual harm by virtue of being a member of a group or society, it becomes

increasingly difficult to make such effects individualizable and pass the *de minimis* standard. Applicants must also be able to demonstrate a causal link between the potential harm and the Big Data process, which may be problematic because most data processes form a structural and intrinsic part of the current society.

48. In addition, many of the effect Big Data technologies and applications may only materialize in full after a few years and potentially even decades, while the current legal paradigm underlines the fact that harm must already be suffered by an applicant when invoking Article 8 ECHR. While the more conventional privacy violations were clearly demarcated in time, place and person and the effects are therefore relatively easy to define, large scale data processing operations often form an integral and permanent part of daily activities and while the victims were mostly aware of the fact that their privacy had been breached with respect to the conventional privacy violations, in the current technological environment, the individual is often simply unaware that her personal data are gathered. Even if a person would be aware of these data collections, given the fact that data gathering and processing is currently so widespread and omnipresent, it will quite likely be impossible for her to keep track of every data processing operation which includes (or might include) her data, to assess whether the data controller abides by the legal standards applicable, and if not, to file a legal complaint.

49. A solution might be found by turning to the notion of ‘quality of life’, which the ECtHR has already deployed in a number of areas, such as cases revolving around environmental pollution, matters concerning the medical domain and the protection of minorities and weaker groups. By using this notion, the Court has broadened the material scope of Article 8 ECHR to include a range of matters that are peripheral to the right to privacy and would intuitively, if accepted, be linked more easily to other provisions in the Convention, such as the right to life, the prohibition on degrading treatment and the right to marry and found a family. Using this notion, the Court acknowledges that it provides protection to a host of issues under the right to privacy that go beyond the scope that it normally attributed to the protection of a person’s private and family life, home and communication.

50. In addition, when it refers to the quality of life of the applicant, it is willing to accept different standards with respect to individual harm than it normally would. It acknowledges that this notion is a highly subjective one, meaning that it is willing to declare cases admissible even if the applicant cannot demonstrate objectively a causal link between the action of inaction by the government and the harm complained of, such as in cases revolving around environmental pollution. Much like Big Data operations, such cases typically revolve around general and societal effects of systemic and structural industrial or economic operations; though under the normal approach to Article 8 ECHR, such claims would be rejected, the ECtHR uses the notion of quality of life to declare cases admissible when it is difficult to substantiate that such general effects had a particularly, and thus individualizable, effect on applicants’ lives, such as is the case with the noise pollution caused by airports. Doing so, the

requirement that the applicant must have suffered from substantial harm is almost annulled. Furthermore, the Court allows claimants to rely on future and hypothetical harm, inter alia when accepting mothers' concerns over the health of unborn babies, while in its standard jurisprudence, such would be denied. The jurisprudence of the Court on the notion of quality of life also mean that a person may suffer from harm to her quality of life when the quality of life of a person she is closely connected to is reduced or low, such as with future babies suffering from a genetic effect. Finally, governments may be under a positive obligation to ensure that the quality of life of its citizens is not negatively impacted by the conduct of third parties, such as actively promoting minority cultures and making sure the streets are cleaned of stray dogs.

51. Applying this doctrine to the data driven context would solve a number of problems the current privacy paradigm faces when applied to the current and unfolding technological reality and allow for a more flexible approach to privacy protection in the age of Big Data. When accepted under EU law as well, it would mean that the problematic and binary contrast between personal and non-personal data would be enriched with shades of grey. As many have argued, such would be in the spirit of the GDPR, which aims to set limits to data processing operations where they have detrimental effects on an individual or a societal level. 'The processing of personal data should be designed to serve mankind. The right to the protection of personal data is not an absolute right; it must be considered in relation to its function in society and be balanced against other fundamental rights, in accordance with the principle of proportionality. This Regulation respects all fundamental rights and observes the freedoms and principles recognized in the Charter as enshrined in the Treaties, in particular the respect for private and family life, home and communications, the protection of personal data, freedom of thought, conscience and religion, freedom of expression and information, freedom to conduct a business, the right to an effective remedy and to a fair trial, and cultural, religious and linguistic diversity'.<sup>55</sup>

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55 Recital 4 GDPR.



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