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Insurtech and Protection of the Person in the Processing of Genetic Data

Insurtech e tutela della persona nel trattamento dei dati genetici

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Abstract

The article examines the relationship between insurance and the processing of genetic data, with particular reference to the insurtech context, namely situations in which the data subject's genetic profile is delineated through artificial intelligence systems. Building on the distinctive features of genetic data and the specific legal provisions governing their processing, it argues that such data require enhanced protection, inter alia to prevent discriminatory outcomes. This leads to the conclusion – also in light of the rules on oncological oblivion and of the EU Regulation on the European Health Data Space (EHDS) – that insurance undertakings may not lawfully require the disclosure of such information. Moreover, within the same regulatory framework, the article contends that insurers may not lawfully infer the data subject's genetic profile through artificial intelligence and algorithmic Big Data processing for the purposes of assessing the insurable risk and, accordingly, shaping contractual terms.

Abstract
Il contributo si interroga sul rapporto tra assicurazione e trattamento dei dati genetici, in particolare nel contesto insurtech, ossia quando il profilo genetico dell'interessato venga delineato mediante sistemi di intelligenza artificiale. Muovendo dalle caratteristiche dei dati genetici e dal dato normativo ad essi relative, si nota come tali dati richiedano una tutela rafforzata, anche al fine di prevenire conseguenze discriminatorie. Ne deriva l'esclusione, anche alla luce della disciplina sull'oblio oncologico e del Regolamento UE sullo spazio europeo dei dati sanitari (EHDS), della possibilità per gli assicuratori di pretendere lecitamente la comunicazione di tali informazioni. Inoltre, alla luce del predetto quadro normativo, si osserva che il profilo genetico dell'interessato non può essere ricavato lecitamente dalle imprese mediante sistemi di intelligenza artificiale e trattamento algoritmico dei Big Data, al fine di valutare il rischio da assicurare e delineare, così, le condizioni contrattuali.

Keywords: Insurtech; insurance; genetic data

1. Genetic Data, Insurance Risk and Artificial Intelligence.

The processing of personal data has become central in the contemporary socio-economic landscape,[1] where the extensive use of such information has been made possible by advances in data-collection and data-analysis tools.[2] In particular, the predictive potential of personal data – strengthened by algorithmic techniques and their integration with artificial intelligence – has transformed the ways in which such information is collected and managed, intensifying debate about the relationship among technological innovation, economic interests, and the protection of fundamental rights.[3]

Among personal information, one category in which the tension between these competing needs for protection is particularly acute is genetic data,[4]

[1] S Rodotà, *Tecnopolitica. La democrazia e le nuove tecnologie della comunicazione* (Laterza 2004) 174-175.

[2] C Perlingieri, 'Creazione e circolazione del bene prodotto dal trattamento algoritmico dei dati' in P Perlingieri, S Giova and I Prisco (eds), *Il trattamento algoritmico dei dati tra etica, diritto ed economia* (E.S.I. 2020) 177 ff; A Alpini, 'Identità creatività e condizione umana nell'era digitale' [2020] Tecn. dir. 4 ff.

[3] P Perlingieri, 'Privacy digitale e protezione dei dati personali tra persona e mercato' (2018) 2 Foro nap. 481 ff; MC Spena, *La salute tra nuove sfide della contemporaneità. Digitalizzazione, privacy e modelli di governance* (Editoriale Scientifica 2023) 95, who, starting from the transformations – also economic ones – brought about by the digital revolution, emphasises the need to re-contextualise the relationship between fundamental rights and new technologies. More generally, on the need to redefine the balancing of fundamental rights in the light of socio-economic changes, see Italian Constitutional Court, 9 maggio 2013, n 85, *cortecostituzionale.it*.

[4] A Bernes, 'Dati e ricerca genetica. Dalla tutela individuale alla gestione procedurale' (2022) 1 BioLaw J. 71-72. In the European scholarship, for a systematic reconstruction of the notion of special category of personal data and of the discriminatory risk underlying it, see P Quinn and G

which Regulation (EU) 2016/679 (GDPR) qualifies as «personal data relating to the inherited or acquired genetic characteristics of a natural person which give unique information about the physiology or the health of that natural person and which result, in particular, from an analysis of a biological sample from the natural person in question» (art. 4, n. 13). [5] This definition was further elaborated in Recital 34, which clarifies that «genetic data» refers, in particular, to information obtained «from the analysis of a biological sample from the natural person in question – especially chromosomal, deoxyribonucleic acid (DNA) or ribonucleic acid (RNA) analysis – or from the analysis of another element enabling equivalent information to be obtained», [6] and was subsequently reiterated in point 4.1(a) of the Decision of the Italian Data Protection Authority No. 146 of 5 June 2019.[7]

These normative references, together with the provisions laid down in Article 2-septies of the Privacy Code, show that, from a legal standpoint, genetic data constitute a particular species of sensitive data,[8] insofar as they not only identify the individual unambiguously,[9] but also embed information

Malgieri, 'The Difficulty of Defining Sensitive Data – The Concept of Sensitive Data in the EU Data Protection Framework' (2021) 22 German Law Journal 1583 ff, esp. 1589-1595. On the data-protection challenges raised by the algorithmic aggregation of big genetic data, see P Quinn and L Quinn, 'Big Genetic Data and Its Big Data Protection Challenges' (2018) 34 Computer Law and Security Review 1000 ff.

[5] On the relationship between genetic data and biological samples, and the related issues concerning the circulation of the latter, see, *inter alia*, A Azara, 'Dal problema giuridico della trasfusione del sangue al problema giuridico del trattamento dei dati genetici' [2025] Rass. dir. civ. 735 ff, esp 739 ff; V Caredda, 'Campioni biologici e Big Data: l'evoluzione del consenso' [2022] Dir. fam. pers. 1061 ff; LM Lucarelli Tonini, 'Biobanche e campioni biologici' in A Maniaci (ed), *Nuovi beni e new properties* (Pacini 2023) 189 ff; I Rapisarda, 'Brevi note sullo Statuto giuridico del materiale biologico umano' (2017) 2 Europa e dir. priv. 625 ff; P Femia, 'Il campione biologico come oggetto di diritti. Bene giuridico e processi di valorizzazione' in D Farace (ed), *Lo statuto etico-giuridico dei campioni biologici umani*, in Dir. merc. tecn., num. spec. (2016) 187 ff; V Ricciuto, 'Campioni biologici tra bioetica e biodiritto' in D Farace (ed), *Lo statuto etico-giuridico dei campioni biologici umani*, in Dir. merc. tecn., num. spec. (2016) 145 ff; C Cicero, 'Anche i giuristi hanno da saper manovrare il microscopio' (osservazioni in tema di c.d. donazione dei campioni biologici umani)' (2019) 2 Dir. fam. pers. 1224 ff; M Macillotti, 'Proprietà, informazione ed interessi nella disciplina delle biobanche a fini di ricerca' (2008) 2 La nuova giur. civ. comm. 222 ff; P Zatti, 'Principi e forme del "governo del corpo"' in S Rodotà and P Zatti (eds), *Trattato di biodiritto: Il governo del corpo* (Giuffré 2011) 99 ff.

[6] Scholarly debate has long addressed the need to adopt a notion of genetic data that places emphasis not on the content of the data (as the definition set out in the Regulation would seem to do), but rather on the manner in which the information is extracted, namely through genetic testing. On the former view, see E Stefanini, *Dati genetici e diritti fondamentali. Profili di diritto comparato ed europeo* (Padova 2008) 2; A Silvers and MA Stein, 'An equality paradigm for preventing genetic discrimination' [2002] Vanderbilt Law Rev. 1342 ff; HT Greely, 'Genotype discrimination: the complex case for some legislative protection' [2001] U. Pa Law Rev. 1483 ff. On the opposite view, see GJ Annas, LH Glantz and PA Roche, 'Drafting the Genetic Privacy Act: Science, Policy, and Practical Considerations' [1995] Journal of Law, Medicine and Ethics 360 ff.

[7] Decision of the Italian Data Protection Authority No. 146 of 5 June 2019 laying down provisions on the processing of special categories of data pursuant to Article 21(1) of Legislative Decree No. 101 of 10 August 2018.

[8] Today, "special categories of personal data".

[9] This is also true of biometric data, which likewise enable (or confirm) the unambiguous identification of the individual, so much so that the two categories of data are treated jointly by Regulation 2016/679, in Article 9. On the processing of biometric data, also in light of the issues

which, by virtue of its high predictive capacity, may profoundly affect both the identity of the data subject and of those who share the same genetic trait,[10] as well as the behavioural choices of those who entertain economic relationships with that person.[11]

It is precisely these features that make the delicacy of processing operations involving such data apparent, especially where such activities take place within specific economic negotiations, such as those connected with the conclusion of an insurance policy, in which the dialectic between the protection of the individual and market logics is particularly significant.[12]

The issue becomes even more complex with the use of artificial intelligence techniques, which, by enhancing the capacities for data acquisition, cross-referencing and inference, increase the risk that genetic information will be used – even in the absence of the prospective insured's explicit consent – to estimate the likely onset of future pathologies and, therefore, to determine, in a predictive manner, the magnitude of the insurance risk associated with the policyholder.

Indeed, in an insurance system centred on risk assessment, the availability of information endowed with high predictive capacity, such as genetic data, constitutes a factor of particular interest for the insurer, drawn by the prospect of refining its actuarial models and estimating with greater accuracy the probability that the insured event will occur, with consequent repercussions for the quantification of the premium and the definition of contractual terms.[13]

However, Article 9 GDPR, by generally prohibiting the processing of genetic data and allowing it only in certain specific cases,[14] shows that such data, given their close connection with the most intimate sphere of the individual, are conceived as information that is, as a rule, extraneous to the logics typical of

raised by artificial intelligence, see the insightful analysis by AC Nazzaro, 'La tutela dei dati biometrici tra GDPR e AI ACT' [2024] EJPLT 2 ff.

[10] Caredda (n 5) 1080.

[11] S Rodotà, 'Tra diritto e società. Informazioni genetiche e tecniche di tutela' [2000] Riv. crit. dir. priv. 584, who notes that genetic tests, in addition to having significant implications for health and scientific research, «tend to reshape individual behaviour, personal and social relations, public choices and business strategies. Genetic testing and genetic screening are multifunctional and thus encourage their use in the most diverse fields, from the prevention and treatment of diseases to the fight against crime, from personal identification to the conclusion of employment and insurance contracts, and so forth» (author's translation). Similar risks were subsequently highlighted by the joint Working Group of the Italian National Bioethics Committee and the National Committee for Biosafety, Biotechnology, and Life Sciences, as evidenced by the study *Test genetici e assicurazioni* (20 October 2008), available at https://cnbbsv.palazzochigi.it/media/1533/p2008-misto-1-test-genetici-e-assicurazioni-it-text.pdf. (accessed 24 January 2026) The issue had already been recognised by the National Bioethics Committee, as shown by the opinion *Orientamenti bioetici per i test genetici* (19 November 1999), available at (accessed 24 January 2026): https://bioetica.governo.it/it/documenti/pareri/orientamenti-bioetici-per-i-test-genetici/.

[12] F Mollo, *Protezione dei dati personali e profili assicurativi* (Cedam 2020) 184.

[13] S Landini, 'Assicurazioni sanitarie e privacy genetica' (2003) 1 Dir. pubbl. 219 ff, esp 226 ff.

[14] The same perspective is taken in Article 10 of the subsequent EU Regulation 2018/1725 of the European Parliament and of the Council of October 23, 2018, on the protection of natural persons with regard to the processing of personal data by the institutions, bodies, and agencies of the Union and on the free movement of such data.

obligatory and contractual relationships.[15] This explains why some authors have maintained that the use of such information may give rise to a genuine paradox:[16] while, on the one hand, mapping the genetic make-up generally enables significant advances in the prevention and early diagnosis of numerous pathologies, on the other hand the use of the human genome within activities pursued for economic purposes could jeopardise the individual's fundamental rights and freedoms,[17] with potentially discriminatory consequences.[18]

In this context, it is therefore necessary to assess, in the light of the legal and value-based framework of the Italian legal system, whether and how such data may be processed and, in particular, what limits apply to their use in the insurance sector, given the expected evolution of artificial intelligence systems. This is especially the case where an algorithmic system is capable of inferring the data subject's genetic profile even in the absence of any disclosure of genetic data by the data subject.

2. The Characteristics of Genetic Information.

The GDPR, departing from the regime laid down in Directive 95/46/EC, in which genetic data were not specifically addressed,[19] provides a definition of this category of data, highlighting certain distinctive features that contribute to making it a unicum within the landscape of personal information. Indeed, as they derive directly from the analysis of an individual's genetic make-up (DNA or RNA), genetic data constitute his or her "biological signature", namely an ineludible – and, save for developments that might result from gene editing[20]

[15] A Thiene, 'La regola e l'eccezione. Il ruolo del consenso in relazione al trattamento dei dati sanitari alla luce dell'art. 9 GDPR' in Ead and S Corso (eds), *La protezione dei dati sanitari. Privacy e innovazione tecnologica tra salute pubblica e diritto alla riservatezza* (Jovene 2023) 13.

[16] F Agnino, 'Nozione di dati genetici ed il decalogo di legittimità al loro trattamento' [2014] Danno e resp. 47 ff.

[17] MT Annecca, 'Test genetici e diritti della persona' in S Rodotà and P Zatti (eds), *Tratt. di biodiritto: Il governo del corpo* (Milano 2011) vol I, 389 ff; M Petrone, 'Trattamento dei dati genetici e tutela della persona' (2007) 8-9 Fam. dir. 853.

[18] Cfr. Rodotà (n 11) 586, who, with specific reference to genetics, points out that «[…] the possibility of identifying specificities and differences may also be exploited in order to distinguish, discriminate, and exclude from access to opportunities and services those who possess certain traits, thereby bringing to the fore troubling parameters of genetic normality» (author's translation). See also J Monducci, *Il dato genetico tra autodeterminazione informativa e discriminazione genotipica* (Bologna 2013) 93; C Campiglio, 'Il principio di non discriminazione genetica nella recente prassi internazionale' (2008) 3 Diritti umani e dir. internazionale 513 ff; FM Cirillo, 'La progressiva conoscenza del genoma umano: tutela della persona e problemi giuridici connessi con la protezione dei dati genetici' [2002] Riv. dir. civ. 414 ff.

[19] The Directive, in Article 8, addressed so-called sensitive data, but did not expressly mention genetic data, limiting itself to including – alongside data relating to racial or ethnic origin, religious or philosophical beliefs, trade-union membership and sexual life – also data concerning health. Accordingly, under that regime, a complete, albeit generic, definition of genetic data was contained in the authorisation for the processing of such data of 22 February 2007, adopted by the Garante per la protezione dei dati personali, in which genetic information was defined as «the data which, irrespective of its type, concerns an individual's genotypic constitution, or the genetic traits transmissible within a group of individuals linked by family ties» (author's translation).

[20] This involves the manipulation of DNA in order to correct potential genetic errors, both in somatic and in embryonic cells. See M Rizzuti, 'Editing genetico e diritto di famiglia' in B

– tendentially unmodifiable hallmark, which accompanies the person throughout the whole course of life and even beyond.[21]

Thus, genetic information, in addition to uniquely identifying the individual, [22] also has an intrinsic "group" dimension, since it embeds information that does not relate exclusively to the data subject, but also involves his or her blood relatives, that is, persons who share the same genetic trait with the data subject.[23] It therefore expresses biological continuity across generations, bringing to light the genetic link between ancestors and descendants and making it possible to identify a person's membership of specific family or ethnic groups.[24] In this sense, genetic data delineate the individual's uniqueness while, at the same time, locating his or her identity within a collective dimension, offering a classification that is at once individual and social.[25]

Another feature that makes such data particularly relevant is, as noted, their marked predictive capacity. Unlike ordinary health data,[26] which provide a snapshot of an individual's state of health, genetic data – if properly interpreted through appropriate technical-scientific knowledge and, today, through artificial intelligence – make it possible to delineate both a person's current health condition and the potential trajectories of his or her biological status.[27] The analysis of genomic sequences makes it possible to identify the

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Agostinelli and V Cuffaro (eds), *Relazioni, Famiglie, Società* (Giappichelli 2020) 221 ff; S Bonomelli, *L'editing genetico germinale umano, tra problemi etici e questioni di governance* (Giuffré 2023); A Villella, 'Editing genetico e sperimentazione sugli embrioni tra vecchi problemi e nuove questioni' [2023] Rass. dir. civ. 1023 ff; F Ferretti, 'Human enhancement e identità genetica dell'embrione' [2024] EJPLT 231 ff; G Castellani, 'Terapie germinali e genitorialità. Una breve riflessione' [2024] Annali SISDiC 119 ff; C Parrinello, 'Nuove tecniche genetiche e tutela dell'embrione' [2025] EJPLT 2 ff; PM Visscher and others, 'Heritable polygenic editing: the next frontier in genomic medicine?' [2024] Nature 637 ff.

[21] Mollo (n 12) 185–86; Monducci (n 18) 93; S Rostain and L Villani, 'Biobanche, informazione genetica e banca nazionale del DNA' in C Faralli and M Galletti (eds), *Biobanche e informazioni genetiche. Problemi etici e giuridici* (Aracne editrice 2011) 36; S Deplano, 'Il campione biologico di unidentified person. Profili di sistema' (2022) Special Issue 1 BioLaw J. 45 ff.

[22] C Casonato and M Tomasi, 'Diritti e ricerca biomedica: una proposta verso nuove consonanze' [2019] 1 BioLaw J. 348; see also American Society of Human Genetics, 'ASHG Response to NIH on Genome-Wide Association Studies' (2006) https://www.ashg.org accessed 25 January 2026.

[23] A Bernes, 'Dati e ricerca genetica' (n 4) 69; L Marilotti, 'I dati genetici tra dimensione individuale e collettiva' [2021] 1 BioLaw J. 168; N Ram, 'DNA by the entirety' (2015) Columbia Law Review 904. From a European perspective, on the qualification of genetic data as a special category under Article 9 GDPR and on their irreducible familial and relational dimension, see M Shabani and P Borry, 'Rules for processing genetic data for research purposes in view of the new EU General Data Protection Regulation' (2018) 26 European Journal of Human Genetics 149, 151-153; for a reading of genetic data in a 'relational' key, see also RÁ Costello, 'Genetic Data and the Right to Privacy: Towards a Relational Theory of Privacy?' (2022) 22(1) Human Rights Law Review 1 ff.

[24] Ram (n 23) 876-877; Taylor and Whitton (n 23) 1 ff.

[25] See Rodotà (n 11) 584; Caredda (n 5) 1084.

[26] See Caredda (n 5) 1069 n 19, who highlights that the concepts of health data and genetic data do not perfectly overlap, since not all health-related information is genetic and, conversely, the latter, while providing elements relating to a person's identity, do not necessarily describe his or her current state of health.

[27] See Cass. 13 settembre 2013, n 21014, in Rass. dir. farm. (2014) 2 283 ff, which clarified that genetic data «(a) […] are personal data of the highest degree of exclusivity; (b) […] are not limited to data of a health-related nature or concerning sexual life; (c) […] have a predictive potential

data subject's (or his or her relatives') predisposition to the development of certain pathologies, also estimating the risk of their onset.[28] This makes such information a unicum that distinguishes it from any other piece of personal data,[29] allowing one to define not only what the person is, but also what the person may become,[30] thereby revealing its identity-related and existential significance.[31]

It is precisely in the light of these peculiarities that one can understand why the European legislature, in Article 9 GDPR, generally prohibits the processing of genetic data (para. 1), allowing it only where the data subject has given explicit consent for one or more specific purposes, or for the protection of overriding interests of a general nature, such as in cases of prevention, diagnosis, therapy, scientific research, or for evidentiary purposes in civil or criminal proceedings, and in any event provided that appropriate safeguards are in place to protect the subject's fundamental rights and freedoms.

These interests, precisely because they are public in nature and super-individual, while, on the one hand, they may justify a derogation from the prohibition on processing genetic data, on the other hand they nonetheless require the adoption of adequate and specific precautions to safeguard the data subject's rights, fundamental freedoms, health and dignity.[32]

To these precautions are added the specific prescriptions adopted both by the Oviedo Convention on Human Rights and Biomedicine – which prohibits any form of discrimination against a person on the basis of his or her genetic heritage (Art. 11) and limits predictive genetic testing to medical or medical-research purposes – and by the measures of the Data Protection Authority, aimed at fostering preventive and reinforced protection of such data on the basis of the principle of accountability,[33] so as to avoid improper uses and to confine their processing to those cases in which it proves strictly necessary for pursuing the permitted purposes.[34]

Moreover, the Data Protection Authority has established that the disclosure of genetic data must be subject to stringent limits, since such information may,

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that determines their ontological distinctiveness» (author's translation) as compared with other categories of personal data.

[28] E Errigo, 'Big healthcare data sets: circolazione e nuove forme di appartenenza' [2022] 3 BioLaw J. 88.

[29] Recently, the European legislator also seems to have recognized the exceptional nature of genetic data compared to other health data. EU Regulation 2025/327 of the European Parliament and of the Council of February 11, 2025, on the European Health Data Space (which entered into force on March 26, 2025, amending Directive 2011/24/EU and Regulation (EU) 2024/2847), in defining, in Article 2, health data, has placed genetic data separately, which, although included in paragraph 2, no. 2 among 'personal electronic health data', are understood as a separate category.

[30] Rodotà (n 11) 584.

[31] See S Salardi, 'Informazioni genetiche e diritto. Quale tutela per l'individuo?' in C. Faralli and M. Galletti (eds) *Biobanche e informazioni genetiche. Problemi etici e giuridici* (Roma 2011) 120.

[32] See art 2-*septies*, Italian Data Protection Code.

[33] See F Mollo, 'Il trattamento dei dati genetici tra libera circolazione e tutela della persona' [2022] 1 Jus civile 70 ff, esp 73.

[34] Decision of the Italian Data Protection Authority No. 146 of 5 June 2019 laying down provisions on the processing of special categories of personal data pursuant to Article 21(1) of Legislative Decree No. 101 of 10 August 2018, point 4.

as a rule, be made known only to the data subject and not to third parties, save where the latter belong to the same genetic line and provided that this is expressly authorised by the data subjects and entails a concrete and direct benefit for their health or for their reproductive choices.[35] Indeed, Recital 51 of the GDPR underscores that genetic data deserve specific and reinforced protection compared with other types of data, precisely because they are intrinsically connected to the person as such, providing information which, by its nature, affects the individual's inviolable rights and freedoms, health, identity and dignity. Accordingly, it is precisely the close link between such data and the individual's existential sphere that justifies the restrictions described, legitimising the recognition of an "enhanced" right to privacy for the individual concerned, that is, one capable of ensuring an effective power of control over the use, dissemination and knowability of the genetic information relating to that individual.

3. The accessibility of genetic information by insurance companies. Critical Remarks.

Genetic data therefore represent a specific and problematic locus of conflict between opposing claims that call for an appropriate balancing, first and foremost in order to determine whether insurance companies may lawfully demand knowledge of policyholders' genetic profiles.

As is well known, insurers' interests are essentially linked to the correct determination of the risk associated with the insured event and are safeguarded through the instruments provided by Articles 1892, 1893 and 1898 of the Italian Civil Code.[36]

As already noted, in a system founded on risk assessment, knowledge of genetic information capable of predicting the evolution of the policyholder's state of health represents an element of great importance for insurers, who are attracted by the possibility of refining their actuarial models and estimating with greater precision the probability that the insured event will occur. Such data, insofar as they may provide indications both as to the insured's current condition and as to his or her predisposition to developing certain pathologies, enable, if known, an ever less approximate evaluation of the risk inherent in the

[35] A derogation from the requirement to obtain the data subject's consent is permitted only where the results of genetic tests and screening are indispensable in order to avert harm to the health of persons belonging to the same genetic line as the subject, and where the latter's consent has not been given or cannot be given due to actual unavailability (see Decision of the Italian Data Protection Authority No. 146 of 2019, point 4.6). On this issue, see Azara (n 5) 760 ff.

[36] These provisions, essentially aimed at rebalancing the informational asymmetry typical of the insurance contract, establish that, in the event of inaccurate statements or omissions capable of affecting the insurer's consent or the contractual terms, the insurance undertaking may seek annulment of the contract where the policyholder's conduct was intentional or grossly negligent (art 1892), or withdraw from the contract where such subjective elements are absent (art 1893), or where supervening changes capable of aggravating the risk have not been promptly disclosed by the policyholder (art 1898). On the inapplicability of these remedies in cases of non-disclosure of genetic data, see L Dani, 'Il trattamento dei dati genetici nel contratto di assicurazione' (2025) 13 Annali SISDiC 31 ff.

contract, of the amount of the premium and of the convenience of the transaction, thereby allowing tailored contractual conditions to be set.[37]

Set against these needs of the insurer, however, stand the aforementioned personal rights of the insured, which require adequate protection of his or her health, privacy, identity and freedom of self-determination vis-à-vis the possible disclosure of such information to third parties, also in order to avoid discriminatory consequences contrary to the Constitution (Arts. 2 and 3), to Article 21 of the Charter of Nice, and to the UNESCO Universal Declaration on the Human Genome and Human Rights of 11 November 1997.[38]

Against this backdrop can also be placed Law No. 193 of 7 December 2023 which, precisely in order to prevent cancer survivors from suffering discriminatory consequences for pathological events that have now been

[37] See Landini (n 13) 226 ff; S Barison, 'Assicurazioni sanitarie e test genetici in Italia e negli Stati Uniti: affinità materiali e differenze giuridiche fondamentali' (2000) 1 Riv. dir. civ. 143 ff; Caredda (n 5) 1080. For a broader analysis of the relationship between genetic data and private insurance within the European legal space, see I Van Hoyweghen and L Rebert, 'Your Genes in Insurance: From Genetic Discrimination to Genomic Solidarity' (2012) 9 Personalized Medicine 871. For a more detailed discussion, see 'Test genetici e assicurazioni' (Opinion of 20 October 2008, Working Group established by the National Bioethics Committee and the National Committee for Biosafety, Biotechnology, and Life Sciences) (n 11).

[38] Indeed, the discriminatory implications associated with the use of genetic data by insurance undertakings may affect both access to insurance policies and the determination of their terms and conditions. In particular, any knowledge of the policyholder's genetic predispositions may lead the insurer to refuse coverage or to apply increased premiums to individuals deemed to be "at risk", thereby making insurance excessively burdensome or entirely inaccessible. An even more critical scenario would arise where, on the basis of the genetic profile, insurers were to exclude specific diseases from coverage. In that case, discrimination would stem not from an objective assessment of the individual's current state of health, but from merely probabilistic data, with the effect of undermining the very function of insurance and raising serious questions as to the compatibility of such practices with the prohibition laid down in Article 21 of the Charter of Fundamental Rights of the European Union. In this regard, see M Tomasi, *Genetica e Costituzione. Esercizi di eguaglianza, solidarietà e responsabilità* (Editoriale Scientifica 2019) 202 ff; M Tomasi and C Casonato, 'Regulating genetic data in insurance and employment: the Italian «upstream» way' [2018] Special edition Annuario di Diritto Comparato e di Studi Legislativi 441 ff; E Spiller, 'Le implicazioni giuridiche della ricerca genetica. Spunti dal Genetic Information Nondiscrimination Act' [2016] BioLaw J. 301 ff; A Blandini and O De Cicco, 'Genetic test and insurance practice: when lawyer met God' in C Botta and C Armbrüster (eds), *The impact of genetic data on medicine and insurance practice* (E.S.I. 2014) 53 ff; C Casonato, 'La discriminazione genetica: una nuova frontiera nei diritti dell'uomo?' (11 June 2001) Biodiritto, https://www.biodiritto.org/Pubblicazioni/Gruppo-BioDiritto/La-discriminazione-genetica-una-nuova-frontiera-nei-diritti-dell-uomo (accessed 8 February 2026); S Barison, 'Formazione del contratto e dignità della persona: una sentenza penale in materia di lavoro apre nuove prospettive' [1999] Danno e resp. 896; PR Billings and others, 'Discrimination as a consequence of genetic testing' (1992) 50(3) American Journal of Human Genetics 476 ff. In more recent European scholarship, for a proposal of a unitary normative response to the phenomenon of genetic discrimination, see A de Paor and D Ferri, 'Regulating Genetic Discrimination in the European Union' (2015) 17 European Journal of Law Reform 14, as well as, for the overall framework, G Quinn, A de Paor and P Blanck (eds), *Genetic Discrimination: Transatlantic Perspectives on the Case for a European-Level Legal Response* (Routledge 2014). For a systematic review of the evidence, including empirical findings, on genetic discrimination in the European insurance market, see Y Joly, I Ngueng Feze and J Simard, 'Genetic Discrimination and Life Insurance: A Systematic Review of the Evidence' (2013) 11 BMC Medicine 25.

overcome,[39] not only recognises, in Article 1(2), the right of persons who have recovered from an oncological disease not to provide information, nor to be subjected to inquiries, regarding their previous pathological condition (so-called oncological oblivion), but in Article 2 also expressly provides, inter alia, that insurance companies may not request health information concerning oncological diseases suffered by policyholders whose treatment ended, without recurrence, more than ten years earlier (or five years if the disease arose before the age of twenty-one), and that, should such information have been acquired by the insurer at an earlier time, it may not be used for risk assessment. These principles are reinforced by paragraph 6, which provides for the nullity of insurance-contract clauses that depart from such rules.[40]

The legislature therefore intended to exclude the existence of a right on the part of the insurer to access certain specific genetic information, such as that relating to a previous pathological condition. This means, on the one hand, that the data subject will not have to disclose it, with the consequent inapplicability of the remedies laid down in Articles 1892 and 1893 of the Civil Code; on the other hand, it means that, even where the insurer is aware of it, it may not take it into account in assessing risk and determining contractual terms, but must instead apply the criteria and conditions applicable to subjects who have never suffered from oncological diseases.[41]

More generally, the recent Regulation (EU) 2025/327 on the European Health Data Space (EHDS)[42] also points towards the non-usability of genetic data within the insurance contract. That instrument expressly prohibits the processing of such data[43] in order to "tak[e] decisions in relation to a natural person or a group of natural persons in relation to […] offering less favourable terms in the provision of goods or services, including exclusion of such persons

[39] As is known, Law No. 193 of 2023 was enacted in implementation of Directive 2023/2225/EU, whose Recital 48 expressly states the aim of preventing forms of discrimination against former oncology patients. The Italian measure is inscribed in a broader European movement: on the genesis of the Directive and on the progressive affirmation of cancer survivors' 'right to be forgotten' within the Union, see H van Kolfschooten, 'A European Cancer Survivors' Right to be Forgotten?' (Petrie-Flom Center, Bill of Health, 28 September 2023), https://petrieflom.law.harvard.edu/2023/09/28/a-european-cancer-survivors-right-to-be-forgotten/ (accessed 8 February 2026); as well as, for a synthesis of the rationale underlying the extension of this right, M Lawler and F Meunier, 'Don't Make Cancer Survivors Pay Twice – The Right for Them to Be «Forgotten» Should Be Law Everywhere' (2022) 378 BMJ o2197.

[40] On the nature of this nullity, see, recently, D Corvi, 'Discriminazione contrattuale e diritto all'oblio oncologico nelle polizze assicurative' [2025] Riv. giur. del Molise e del Sannio 439 ff.

[41] See also art 60 of Legislative Decree No 196/2003, as amended by Legislative Decree No 101/2018, which – albeit in a different context – permits access to genetic data only where the legally relevant situation that the request for access seeks to protect is of at least the same rank as the rights of the data subject, or consists in a personality right or another fundamental right or freedom.

[42] Regulation (EU) 2025/327 of the European Parliament and of the Council of 11 February 2025 on the European Health Data Space and amending Directive 2011/24/EU and Regulation (EU) 2024/2847, entered into force on 25 March 2025. For the first scholarly analyses of the regime of secondary use of health and genetic data introduced by the EHDS, see V van Drumpt and others, 'Secondary Use under the European Health Data Space: Setting the Scene and Towards a Research Agenda on Privacy-Enhancing Technologies' (2025) Frontiers in Public Health.

[43] For the purposes of Article 2(2)(a) of the Regulation, "health data" encompasses both data concerning health and genetic data.

or groups from the benefit of an insurance […], the modification of their contributions and insurance premiums […], or taking any other decisions in relation to a natural person or a group of natural persons which result in discriminating against them on the basis of the health data obtained" (art. 54).[44] This, ultimately, shows that access to such information and its processing within the insurance contract are regarded as activities which, by reason of the potentially discriminatory outcomes to which they may lead,[45] should remain extraneous both to the logics of economic efficiency typical of the market and to those of risk selection, given that respect for human dignity and the principle of non-discrimination prevail over them.

4. Insurtech, Genetic Inference and Protection of the Person. Limits to Algorithmic Processing.

In this perspective, it is necessary to ask what guarantees protect individuals against the use of genetic information acquired by insurance companies not directly from the data subject, but through artificial intelligence systems and automated big data analysis. In particular, it is necessary to ask whether it is lawful for insurance companies to use such tools to reconstruct the genetic profile of the data subject and adapt the contractual conditions accordingly.[46]

Indeed, within the context of the progressive digitalisation of the insurance market, known as Insurtech, [47] technological systems based on predictive

[44] The provision refers to so-called secondary use, i.e., the processing of health data for purposes other than those for which such data were originally collected or produced (cfr. art. 2, EHDS).

[45] Not by chance, paragraph 2 of Article 54 Reg. Ue 327/2025 expressly refers to the potential discriminatory risks inherent in the processing of genetic data, extending the scope of the prohibition well beyond the insurance or financial field.

[46] For an analysis of the safeguards afforded to the individual in relation to the use of Big Data, see AC Nazzaro, 'L'utilizzo dei Big data e i problemi di tutela della persona' [2018] Rass. dir. civ. 1239 ff.

[47] The term refers to the legal and economic phenomenon involving firms that invest in emerging technologies – such as artificial intelligence, blockchain, smart contracts and the Internet of Things – with the aim of strengthening their market penetration. Such innovations make it possible to develop new insurance products or to redefine operational and distribution models, thereby profoundly affecting even the provision of traditional insurance services. In general, see S Landini, 'Insurtech: innovation in production, distribution, governance, and supervision in the insurance market' [2021] Assicurazioni 434 ff; MC Gaeta, 'Insurtech in Italy: opportunities, risks and applicable regulation' [2021] EJPLT 10 ff; E Battelli, 'Insurtech ed evoluzione dell'offerta di polizze sanitarie: tra innovazione tecnologica e nuovi servizi assicurativi in campo medico' [2022] Contr. impr. 53 ff; A Luberti and C Tabarrini, 'Insurtech. una ricognizione empirica e giuridica' in *Consumerism 2018. Il cittadino nell'era dell'algoritmo* (Consumers' Forum in collaboration with Università degli Studi Roma Tre, Roma 2018) 93 ff; D Porrini, 'Big Data, personalizzazione delle polizze ed effetti nel mercato assicurativo' in V Falce, G Ghidini and G Olivieri (eds), *Informazione e big data tra innovazione e concorrenza* (Milano 2018) 319 ff; V Ricciardi, 'Insurtech Definition as Its Own Manifesto' in SLB Vanderlinden, SM Millie, N Anderson and S Chishti (eds), *The Insurtech Book* (Wiley 2018) 6 ff; V Chatzara, 'FinTech, InsurTech, and the Regulators' in P Marano and K Noussia (eds), *InsurTech: A Legal and Regulatory View* (Springer 2020) 3 ff. For an assessment of the phenomenon within the specific European horizon, and of the limits that continental law places on the 'automated personalisation' of consumer insurance contracts, see M Infantino, 'Big Data Analytics, Insurtech and Consumer Contracts: A European Appraisal' (2022) 30(4) European Review of Private Law 613.

algorithms and machine learning, together with the growing capacity to store and process enormous volumes of data – health-related, behavioural or environmental – have made possible an increasingly deep knowledge of customers and the consequent attribution to each person of a highly personalised risk profile. [48] One thus witnesses a reconfiguration of the insurance contract according to a user-centric model, in which the consumer-insured is placed at the centre of contractual dynamics. This makes it possible to determine the premium and the terms of insurance coverage on the basis of full knowledge of the individual.[49]

The use of artificial intelligence therefore makes it possible to move towards a system of risk assessment founded no longer on a backward-looking approach, but on a forward-looking one; that is, a model capable of assigning each insured person an algorithmic rating. Such an assessment, based on an in-depth knowledge of the customer – sometimes greater than that which the customer has of himself or herself[50] – makes it possible to predict, with high precision, the risk that the insured event will occur[51] and to elaborate decision-making strategies tailored to it.[52]

In a market driven by selective logics and efficiency, it is therefore clear why the possibility of inferring, through algorithmic systems, customers' health and genetic profiles is particularly attractive for insurers, which may thus estimate risk with great accuracy and design highly personalised products.

Moreover, thanks to its ability to analyse extremely long DNA sequences with great accuracy, artificial intelligence facilitates the identification of genetic variants associated with specific pathological conditions and makes it possible to delineate an extremely detailed health profile of the individual, capable of anticipating the evolution of his or her state of health. This is so given that such systems are able both to process already structured data, such as genomic sequences extracted from biobanks, and to draw inferences from heterogeneous sources, such as environmental and behavioural data or data from wearable devices [53] or electronic health records, nutritional data, consumption profiles and even online interactions.[54] These elements, when

[48] Battelli (n 47) 57.

[49] According to some authors, this has marked the erosion of the traditional insurance model, founded on the principle of mutuality and on statistical calculation, in favour of a system centred on risk personalisation and the individualisation of insurance profiles. On this issue, see Porrini (n 47) 330; E Battelli, 'Gli smart contracts nel mercato delle assicurazioni: limiti e opportunità' [2022] Assicurazioni 523; F Ioannoni Fiore, 'Applicazioni dell'intelligenza artificiale e nuovi strumenti di governo del rischio nei contratti assicurativi' [2022] Riv. dir. impr. 112-13. From a theoretical standpoint, for a thorough European inquiry into the shift from the logic of the 'pool' to that of the individual 'profile', and the consequent implications for the principle of mutuality, see A Cevolini and E Esposito, 'From Pool to Profile: Social Consequences of Algorithmic Prediction in Insurance' (2020) 7(2) Big Data & Society 1.

[50] See Battelli (n 47) 84.

[51] F Ioannoni Fiore, 'Applicazioni dell'intelligenza artificiale' (n 49) 113.

[52] N Abriani and G Schneider, *Diritto delle imprese e intelligenza artificiale. Dalla fintech alla corptech* (Il Mulino 2021) 65.

[53] E Germani and L Ferola, 'Il wearable computing e gli orizzonti futuri della privacy' [2014] Dir. inf. 75 ff; Battelli (n 47) 71.

[54] D Porrini, 'Asimmetrie informative e concorrenzialità nel mercato assicurativo: cosa cambia con i Big Data?' [2016] Conc. e merc. 139 ff.

properly combined, may be traced back to certain genetic traits or used to formulate probabilistic hypotheses concerning the presence of hereditary mutations and an individual's susceptibility to developing specific pathologies.

It is within this context that, on the one hand, the informational asymmetry that characterises the insurance contract is rebalanced,[55] since insurers, through the use of algorithmic systems and access to vast datasets, are able to obtain elsewhere – and often in real time – the information relevant for determining the premium; on the other hand, as has been observed, certain safeguards recognised to the insurer for the correct determination of risk are weakened, such as those provided by Articles 1892 and 1893 of the Italian Civil Code.[56] This is because the remedial framework of the Civil Code presupposes that risk assessment largely relies on information supplied by the policyholder, rather than on information obtained *aliunde* by the insurer. It follows that, in the system that is taking shape, in which risk is assessed autonomously by the insurer through the algorithmic processing of personal data, the effectiveness of those safeguards designed to react to reticent or misleading conduct by the insured is inevitably diluted, and, conversely, there emerges a need to devise suitable and effective remedial strategies aimed at protecting the insured's fundamental rights.

In fact, it must be noted that the use of artificial intelligence by insurers in the processing of genetic data, while offering sophisticated analytical tools and allowing increasingly personalised contractual solutions, raises serious and significant issues as to the prejudicial impact it may have on human dignity, on self-determination and on personal identity.[57] The identity-related and existential relevance of genetic information – which, as noted, does not merely describe an individual's current state of health, but anticipates its evolution and may also involve third parties – requires the greatest attention to be paid to the limits and conditions of lawfulness of processing operations functional to the use of such data in the insurance field.

Algorithmic processing, however advanced, is not immune from errors,[58] which may result in an infringement of the individual's fundamental rights. Indeed, the very AI systems intended to be used for risk assessment and price determination in life and health insurance are classified as "high-risk" systems pursuant to Article 6 of Regulation (EU) 2024/1689 (AI Act).[59] Consequently, the controller is required to adopt particular and stringent measures of control,

[55] V Sangiovanni, 'Dichiarazioni inesatte, reticenze e annullamento del contratto di assicurazione' (2011) 2 Assicurazioni 278-79.
[56] Ioannoni Fiore (n 49) 113.
[57] See S De Polis, 'Le nuove tecnologie digitali applicate alle assicurazioni: il punto di vista del regolatore' [2020] Riv. bancaria 151-52. In more recent European scholarship, for a comprehensive overview of the issues of discrimination and 'unfair differentiation' raised by the use of artificial intelligence in the insurance sector, see M van Bekkum and others, 'AI, Insurance, Discrimination and Unfair Differentiation: An Overview and Research Agenda' (2025) 17 Law, Innovation and Technology 177.
[58] E Fazio, *Intelligenza artificiale e diritti della persona* (E.S.I. 2023) 320. More generally, on the discriminatory implications of algorithmic decision-making within the European legal framework, see FJ Zuiderveen Borgesius, *Discrimination, Artificial Intelligence, and Algorithmic Decision-Making* (Council of Europe – Anti-discrimination Department, 2018) 7 ff and 18 ff.
[59] See, in particular, Annex III, point 5(c) of Regulation (EU) 2024/1689 (AI Act).

transparency, accuracy, traceability, documentation and supervision, necessary to prevent adverse effects on fundamental rights.

Moreover, it should be considered that flaws or distortions in the datasets used to train machine-learning models – due, for example, to informational biases, non-representative selections or erroneous correlations – may lead to inaccurate assessments of the insured's genetic profile, inducing the insurer to set contractual terms that do not correspond to the insured's actual risk conditions, to impose excessively high premiums, or even to exclude coverage altogether.[60] This may occur where AI systems process genetic information relating to the insured without the insured having been aware of it and having provided consent to its processing. One may think, for instance, of cases in which the algorithm is able to infer the insured's genetic profile through the analysis of genetic information relating to persons connected to the insured by family ties, who previously provided their data to the insurance company, and the algorithmic system, drawing on the insurer's database, identifies the family link with the insured and probabilistically reconstructs his or her genetic traits as well.

To avert such distortive consequences, the EU legislature has first provided, in general terms, that the data subject, pursuant to Article 22(1) GDPR, where he or she has not given consent, "shall have the right not to be subject to a decision based solely on automated processing, including profiling, which produces legal effects concerning him or her or similarly significantly affects him or her".[61] This principle cannot be derogated from even where the automated decision is necessary for the conclusion or performance of a contract between the data subject and the controller under Article 22(2)(a).[62] Indeed, the Regulation expressly provides that sensitive data, and therefore genetic data as well, may in no way be used for the conclusion or performance of the contract without the data subject's explicit consent (para. 4), on pain of the unlawfulness of the processing and the activation of all related safeguards.

Furthermore, it should be clarified that, although the aforementioned provision expressly refers to decisions based "solely" on automated processing, it must also be understood as covering those that are "automated in

[60] V Ferrari and L Palopoli, 'Rapporti civilistici e intelligenze artificiali: attività assicurativa' in P Perlingieri, S Giova and I Prisco (eds), *Rapporti civilistici e intelligenze artificiali* (E.S.I. 2020) 193 ff, esp 207.

[61] On the issues relating to the applicability of the provision and the effectiveness of the rule set out in its first paragraph, see E Giorgini, 'Profilazione automatizzata e contratto assicurativo' [2024] Assicurazioni 751 ff. In the European scholarship, on the debate concerning the scope of Article 22 GDPR and the safeguards available to the data subject against fully automated decisions, see S Wachter, B Mittelstadt and L Floridi, 'Why a Right to Explanation of Automated Decision-Making Does Not Exist in the General Data Protection Regulation' (2017) 7 International Data Privacy Law 76, esp. 88-95; I Mendoza and LA Bygrave, 'The Right Not to Be Subject to Automated Decisions Based on Profiling', in T-E Synodinou, P Jougleux, C Markou and T Prastitou (eds), *EU Internet Law: Regulation and Enforcement* (Springer 2017) 77, esp. 85-94; LA Bygrave, 'Article 22 Automated Individual Decision-Making, Including Profiling', in C Kuner, LA Bygrave and C Docksey (eds), *The EU General Data Protection Regulation (GDPR): A Commentary* (OUP 2020) 522.

[62] See R Messinetti, 'La tutela della persona umana versus l'intelligenza artificiale. Potere decisionale dell'apparato tecnologico e diritto alla spiegazione della decisione automatizzata' [2019] Contr. impr. 861 ff.

substance", namely contractual choices that, although formally made by a natural person, confine that intervention to a marginal and residual role, such that it does not play a decisive role as to the content of the decision.[63]

In this scenario, Law No. 193/2023 also becomes relevant: Article 2(1) not only excludes the use, for the purpose of concluding the contract, of genetic information relating to a previous tumour pathology provided by the insured, but further provides that the insurance company may not acquire such data even from sources other than the policyholder and that, where such data are nonetheless in its possession, they may not be used to determine contractual terms. This provision appears to encompass the acquisition of genetic data through artificial intelligence systems as well. he broad and generic wording of the rule, in referring only to "sources other than the policyholder", indeed suggests that such alternative sources of acquisition may also include algorithmic systems.

Even more incisive is the protection afforded to the insured by the aforementioned Regulation (EU) 2025/327 on the European Health Data Space, which, in Article 54, appears to preclude the use of artificial intelligence for assessing the data subject's genetic profile. In particular, by prohibiting the secondary use of genetic data to "adopt decisions" connected with the conclusion or management of contracts for the supply of goods or services, including insurance, the provision must be understood as extending also to decisions based on automated predictive-analytics systems, and thus to algorithmic operations that personalise risk and admit persons to coverage on the basis of the insured's (presumed) genetic profile.

From this standpoint, the prohibition laid down by the EHDS Regulation therefore has a clear systemic significance, imposing a rigorous limit not only on analogue processing of genetic data, but also on automated processing carried out without the data subject's consent.[64]

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[63] Fazio (n 58) 326; E Troisi, 'Decisione algoritmica, Black-box e AI etica: il diritto di accesso come diritto a ottenere una spiegazione' [2022] Jus civile 969. Likewise, for a substantive reading of the notion of a 'solely' automated decision encompassing also those in which human intervention is merely formal, see L Edwards and M Veale, 'Slave to the Algorithm? Why a «Right to an Explanation» is Probably Not the Remedy You Are Looking For' (2017) 16 Duke Law and Technology Review 18, esp. 44-58; G Malgieri and G Comandé, 'Why a Right to Legibility of Automated Decision-Making Exists in the General Data Protection Regulation' (2017) 7 International Data Privacy Law 243. This interpretation has found express recognition in the case-law of the Court of Justice: see CJEU, 7 December 2023, Case C-634/21, SCHUFA Holding, in which the Court clarified that Article 22 GDPR also applies where human intervention in the decision-making process is of a merely formal nature.

[64] The scope of the present work does not permit an exhaustive analysis of two further, interrelated issues. Indeed, once the prohibition on insurance companies processing policyholders' genetic data for the purpose of determining contractual conditions has been established, two questions arise: (a) the evidentiary regime regarding the breach of said prohibition; and (b) the remedies available to the policyholder once a breach is proven. Regarding the first aspect, a presumptive mechanism could be envisioned in cases where, despite the insured not providing any genetic information, the insurer has nevertheless calibrated the contractual terms based on the individual's genetic profile. As for the second aspect, the mandatory nature of the prohibition suggests the nullity of the relevant clauses. In this regard, a significant legal basis can be found in Article 2, paragraph 6, of Law No. 193/2023, which specifically provides for the (protective) nullity of clauses that conflict with the principles set out in the preceding paragraphs. In such a scenario, the issue shifts to the status of the premium –

This is entirely consistent with the axiological structure of our legal system, which, by according precedence to the person's identity-related and existential interests over the logics of personalisation, economic sustainability and risk selection that govern the insurance sector, prohibits undertakings operating in that field from using artificial intelligence systems to delineate the data subject's genetic profile and then to set contractual terms on that basis.

It is, indeed, the paramount values and personalist interests connected with genetic data, together with the uncertainty of their predictive capacity, as well as the concerns related to their uncontrolled dissemination and the possible discriminatory consequences deriving from their disclosure, that lead to withdrawing such information from the indiscriminate application of rules and principles conceived to satisfy purely patrimonial requirements,[65] such as those underlying the contracts at issue and the use of algorithmic software designed to infer the data subject's genetic profile in order to personalise the insurable risk and the contractual terms.

specifically, whether it remains due, is not due, or should be reduced, and if so, to what extent. This matter undoubtedly warrants a more in-depth discussion, which, however, falls outside the focus of this analysis.

[65] P Perlingieri, 'Il diritto civile nella legalità costituzionale secondo il sistema italo-europeo delle fonti' in *Fonti e interpretazione* (E.S.I. 2020) vol III 7 ff and 293–95; P Perlingieri, 'Interpretazione assiologica e diritto civile' [2014] Corti sal. 468 ff; G Perlingieri, 'Sulla falsa alternativa tra *ius positum* e *ius in fieri*. La «creatività vincolata» dell'attività interpretativa' (2023) 10 Annali SISDiC 3.