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Delegating the Obligation to Perform Arising from Treatment Contracts to Artificial Intelligence Systems: Distinguishing Between Sub-Agents and Auxiliary Persons

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Abstract It is generally accepted that physicians fulfil their obligations arising from the treatment contract within a special relationship of trust, making them personally obligated for performance. However, this does not imply that the physician must personally execute each phase of the medical intervention. It is possible for a physician to delegate certain medical tasks to another person. However, the positioning of artificial intelligence (AI) systems in this context is legally controversial. The present article focuses on the question of whether the concepts of sub-agent or auxiliary person can be applied to AI systems by analogy in the context of the transfer of the obligation to perform arising from medical treatment contracts. It is not possible to characterise AI systems as sub-agents due to their lack of economic independence. However, it is considered possible to apply the concept of an auxiliary person to AI systems by analogy. The fact that AI systems lack the capacity to have rights does not prevent the application by analogy. When physicians use AI systems in medical practice, they are obliged to comply with the requirements for the appropriate delegation of medical tasks. While the utilisation of decision support AI systems is unrestricted, the use of substitutive AI systems, particularly in core medical activities, requires a comprehensive evaluation with regard to patient safety and professional accountability.

Keywords Artificial intelligence · sub-agent · auxiliary person · treatment contract

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I. Introduction

Artificial intelligence (AI) systems are currently being presented as one of the most promising developments in digitalisation, with the healthcare sector being a key area of application. The increasing digitalisation of healthcare is generating more diverse medical data than ever before.[1] AI systems capable of analysing and evaluating these vast datasets in a short span of time. By identifying (previously unknown) correlations, AI contributes to significant advancements in medical science and patient treatment. The utilisation of AI systems is expected to enhance the quality of diagnosis and treatment.[2]

The significance of these technological advancements in the field of contract law becomes apparent in the context of contract performance. In the context of a treatment contract, a physician may delegate medical tasks either to another physician as a sub-agent or may apply to auxiliary persons for secondary supportive tasks, provided that the qualified and responsible part of the medical tasks belongs to the physician. Contemporary discourse, influenced by technological advancements, the possibility for physicians to delegate their obligation of performance to an AI system is a matter that is being considered for inclusion on the agenda. In addressing this question, it is crucial to ascertain the applicability of the principles governing the delegation of obligations to AI systems. The application of these principles to AI systems may be feasible through the consideration of such systems as a form of sub-agent or auxiliary person by analogy.

Within the scope of the study, first, it is examined whether it is possible to apply such an analogy between AI systems and sub-agents and auxiliary persons as the addressee of the transferring of the obligation of performance. Following the determination that AI systems can be characterised as the addressee of delegation as an auxiliary person by analogy, it is evaluated how the conditions regarding the admissibility of the delegation to auxiliary persons will be applied in the use of AI systems.

II. The Physician's Personal Performance Obligation in General

As stated in Article 83 of the Turkish Code of Obligations (TCO), an obligation arising from a contract can, in general, be performed by a third party, unless the creditor has a specific interest in the performance of the debt by the debtor himself. In accordance with the stipulations of the aforementioned Article, the debtor is obligated to undertake the performance in person in instances where the performance depends on the personality of the debtor. As commonly accepted in the doctrine, this situation occurs when the performance of the obligation is characterised by the debtor's individual attributes (physical, professional, mental, and/or moral), to the extent that performing the obligation by a third party would lead to a modification of the obligation's content.[3] In other words, this indicates that the nature of the obligation must be contingent on the characteristics of the individual performing the obligation.[4] In particular, mandate contracts require

[1] Christian Katzenmeier, 'Big Data, E-Health, M-Health, KI und Robotik in der Medizin' (2019) MedR 259; Nicole Formica-Schiller, *Künstliche Intelligenz und Blockchain im Gesundheitswesen, wie COVID-19 und zukunftsweisende Technologien den Status quo revolutionieren*, (Urban&Fischer Verlag, 2021) 37.

[2] Formica-Schiller (n 1) 54; Anne-Catherine Hahn,'Digital Medical Applications: Legal and Compliance Risks' (2020) LSR, 20; Djamila Batache, *Künstliche Intelligenz in der Medizin aus haftungsrechtlicher Perspektive*, (Dike Verlag, 2023) 3.

[3] Ulrich Schroeter, *Basler Kommentar zum Obligationenrecht, Obligationenrecht I, Art. 1–529 OR*, (7. Auflage, Helbing Lichtenhahn Verlag, 2020) Art. 68 N 7; Rolf H. Weber, *Berner Kommentar Obligationenrecht, Die Erfüllung der Obligation, Art. 68–96 OR*, (2. Auflage, Stämpfli Verlag, 2005) Art. 68 N 24; Batache (n 2) 80.

[4] Fikret Eren, *Borçlar Hukuku Genel Hükümler* (24. Bası, Yetkin Yayınları, 2019) 1040; Ali Naim İnan/Özge Yücel, *Borçlar Hukuku Genel Hükümler* (4. Bası, Seçkin Yayınları, 2014) 576; Kemal M. Oğuzman/M. Turgut Öz, *Borçlar Hukuku Genel Hükümler Cilt I*, 13. Bası, Vedat Kitapçılık, 2015) 250; Selahattin Sulhi Tekinay/Sermet Akman/Haluk Burcuoğlu/Atilla Altop, *Borçlar Hukuku Genel Hükümler* (7. Bası, Filiz Kitabevi, 1993) 766 ff.; Rona Serozan, *Borçlar Hukuku Genel Bölüm C. III, İfa, İfa Engelleri, Haksız Zenginleşme* (5. Bası, Filiz Kitabevi, 2009) 22 ff.; Serra Veznedaroğlu, *Vekilin Özen ve Şahsen İfa Borçları*, (Seçkin Yayıncılık, 2024) 104; Kerstin Vokinger, 'Das Berufsrecht in der Arzt-Patienten-Beziehung – veranschaulicht an einem Fallbeispiel' (2012) 28 hill N. 36; Walter Fellmann, *Berner Kommentar Obligationenrecht, Der einfache Auftrag, Art. 394–406 OR* (Stämpfli Verlag, 1992) Art. 398 N 526.

the diligent performance of the mandate rather than guaranteeing a specific result. They are generally based on a relationship of trust in the ability and willingness of the party to whom the mandate is given.[5] Consequently, personal performance is frequently emphasised in mandate relationships. Paragraph 1 of Article 506 of the TCO explicitly states that the agent is obliged to perform the principal obligation under the mandate contract in person. This principle also applies to the contractual relationship that forms the basis of the doctor-patient relationship, in which it is accepted that the doctor fulfils their obligations under a special relationship of trust and is therefore obligated to fulfil their performance personally.[6]

However, it should be noted that the personal performance obligation does not necessitate that the physician personally perform each stage of the medical intervention.[7] Therefore, the personal performance of an obligation is not synonymous with an obligation that is closely tied to a person. The delegation of medical tasks[8], particularly those of a doctor, is a common practice in modern medicine. This is based on the division of labour.[9] In this particular instance, the principle of personal performance of the obligation does not prevent delegation in general. It is an uncontroversial assertion that the obligation of personal performance does not cover all obligations arising from the treatment contract; instead, each obligation must be evaluated separately.[10]

III. The Relationship Between the Personal Performance Obligation and the Utilisation of Artificial Intelligence Systems

A significant number of non-intelligent IT systems or medical devices that facilitate the task performance through automation are already in operation within medical practice. The prevailing opinion is that this does not constitute a delegation of medical tasks. Instead, the digital system is characterised as a tool of the user, implicitly integrated with them.[11] In this case, the utilisation of digital systems is predetermined, planned, implemented, directed, monitored and ultimately controlled. These systems are used as tools by the human user in the fulfilment of the task.[12] For instance, if a traditional ventilator used in an intensive care unit is programmed to supply a specific oxygen volume per minute, the question of whether a medical activity is delegated to the system does not arise. Instead, the physician is considered to perform the task of oxygen supplementation, with the breathing apparatus functioning merely as a device.[13] In this process,

[5] İnan/Yücel (n 4) 576; Tekinay/Akman/Burcuoğlu/Altop (n 4) 766 ff.; Serozan (n 4) 22 ff.; Veznedaroğlu (n 4) 104; Aydın Zevkliler/K. Emre Gökyayla, *Borçlar Hukuku Özel Borç İlişkileri* (20. Bası, Vedat Kitapçılık, 2020) 660; Haluk Tandoğan, Türk Mes'uliyet Hukuku (Akit Dışı ve Akdi Mes'uliyet), (Ankara Üniversitesi Hukuk Fakültesi Yayınları, 1961) 456; Mustafa Alper Gümüş, *Borçlar Hukuku Özel Hükümler C. 2* (3. Bası, Vedat Kitapçılık, 2014) 147-148; Fellmann (n 4) BK OR Art. 398 N 527; Batache (n 2) 80.

[6] Walter Fellmann, 'Arzt und das Rechtsverhältnis zum Patienten', in Arztrecht in der Praxis (2. Auflage, Schulthess Verlag, 2007) 119; Vokinger (n 4) N 36; Hardy Landolt/Iris Herzog-Zwitter, *Arzthaftungsrecht* (Dike Verlag, 2015) N 1179; Weber (n 3) Art. 68 N 29.

[7] Batache (n 2) 82; Mirjam Olah, *Die ärztliche Arbeitsteilung und Aufgabendelegation im Rahmen der medizinischen Staatshaftung, unter besonderer Berücksichtigung der Organisationspflichten im Behandlungsumfeld*, (Helbing Lichtenhahn Verlag, 2017) 166.

[8] The concept of delegation as a form of task transfer is utilised in various contexts. The prevailing view is that delegation refers to the transfer of medical activities to other doctors or non-doctor personnel (such as nurses or medical technicians). Depending on the nature and complexity of the delegated activity, delegation may take the form of either substitution by a third- party or delegation to an auxiliary person. However, the concept of delegation should not be confused with that of assistance activities, which involve more elementary secondary tasks that are executed under the continuous supervision of the delegating person, who retains responsibility for significant tasks (Olah (n 7) 154 ff.).

[9] Andrea Büchler/Margot Michel, *Medizin–Mensch – Recht, Eine Einführung in das Medizinrecht der Schweiz* (2. Auflage, Schulthess Verlag, 2020) 219; Batache (n 2) 82.

[10] Schroeter (n 3) Art. 68 N 8; Weber (n 3) Art. 68 N 32; Batache (n 2) 82; Regina E. Aebi-Müller/Walter Fellmann/Thomas Gächter/Bernhard Rütsche/Brigitte Tag, *Arztrecht* (Stämpfli Verlag, 2016) § 7 N 76.

[11] The concept of a "tool" is not a legally recognised concept. However, when associated with AI systems, it is frequently used to distinguish machines from human auxiliaries (Batache (n 2) 92, fn. 563).

[12] Rolf H. Weber/Susan Emmenegger, *Berner Kommentar Obligationenrecht, Die Folgen der Nichterfüllung, Art. 97–109 OR* (2. Auflage, Stämpfli Verlag, 2020) Art. 101 N 41; Batache (n 2) 92.

[13] Batache, (n 2) 92.

the decision-making authority remains with the user and is not transferred to the technical system. Consequently, the personal performance obligation of the doctor remains unaffected.

Whether this conclusion also applies to AI systems should be evaluated. Contrary to traditional devices and machines, AI systems are able to undertake tasks that were formerly delegated to an auxiliary person or performed directly by physicians[14], sometimes even undertaking tasks that are considered to be within the core medical activity.[15] These systems, through their machine learning-based programming, are capable of independently analysing the situations in which they are configured and reacting appropriately, thereby performing tasks that would otherwise be undertaken by a human actor.[16] In this case, the doctor relinquishes certain decision-making authorities and delegates these authorities to the AI system, even if it remains under subsequent supervision.[17] The delegation of medical tasks, particularly fundamental medical tasks, to AI systems in this manner inherently entails a certain degree of risk potential, as AI systems are never entirely free of errors.

IV. Application of the Legal Concepts of Sub-Agent and Auxiliary Persons by Analogy in the Delegation of Performance to Artificial Intelligence Systems

A. General Overview

In order to prevent the risks arising from the delegation of medical tasks to the auxiliary person and to ensure patient safety, the personal performance obligation has become a norm as a principle, and this principle has been reinforced, particularly in certain medical fields.[18] However, when AI systems are considered as simple devices, the doctor is not required to comply with these obligations and limitations. Instead, the assumption is made that the user of the device personally fulfils the obligation of performance and, by extension, assumes responsibility for it.[19] In this context, it is possible for the doctor to use AI systems even in core medical activities without any conditions.

In light of the novelty of AI systems, the wide range of their potential applications, and the associated risks, it is equally important to apply the principles regarding the delegation of the obligation of performance to ensure patient safety, also when AI systems are used. While AI systems are currently primarily used as supportive devices under the direct control of a physician, the imminent emergence of AI systems capable of substituting for a physician in medical treatment demands careful consideration. In this context, it is imperative to address the question of whether and to what extent the principles regarding the delegation of the obligation of performance can be applied to AI systems.

The application of the principles of the delegation of the obligation of performance to AI systems and the determination of the necessary conditions for the admissibility of such delegation might be feasible by considering AI systems as a kind of sub-agent or auxiliary person by analogy. However, it is widely accepted

[14] Kuuya Chibanguza/Christian Kuss/Hans Steege/Jan Eichelberger, *Künstliche Intelligenz, Recht und Praxis automatisierter und autonomer Systeme*, (Nomos Verlag, 2022) § 4 I N 31.

[15] Luisa Mühlböck/Jochen Taupitz, 'Haftung für Schäden durch KI in der Medizin' (2021) 221 AcP 198; Corinne Widmer Lüchinger, 'Apps, Algorithmen und Roboter in der Medizin: Haftungsrechtliche Herausforderungen' (2019) HAVE, 4.

[16] Philipp Hacker, 'Verhaltens- und Wissenszurechnung beim Einsatz von Künstlicher Intelligenz' (2018) RW 244; Batache (n 2) 93.

[17] Batache (n 2) 93. It is stated that systems that perform a pre-programmed task automatically rather than autonomously cannot be said to have decision-making authority (Hacker (n 16) 252).

[18] The physician's personal obligation to perform is stipulated in Article 16 of the Medical Deontology Regulation and Article 23 of the Medical Ethics Rules.

[19] Batache (n 2) 94.

in doctrine that, since AI systems lack the capacity to have rights[20]—an essential element in evaluating them as a sub-agent[21] or auxiliary person[22]—it is not possible, de lege lata to recognise AI systems as auxiliary persons or to apply Article 116 of the TCO directly.[23] The regulatory gap that emerges in this case may allow for the application of the analogy method in determining the validity of the principles regarding delegation in the use of AI systems, insofar as it aligns with its purpose.

Analogy may be defined as the application of a statutory provision—interpreted in accordance with its intended purpose—to a case whose constituent facts do not entirely align, but whose legal consequences may be considered sufficiently similar.[24] For the analogy to be applicable, it is necessary for a situation to exist that is not expressly regulated by law but requires normative regulation. However, such a legal gap must arise from the legislator's ignorance and negligence (i.e., an unconscious legislative gap).[25]

It is possible to resort to the analogy method if a norm is applicable to a situation that lacks direct regulation in terms of its teleological (purposive) main idea. This approach is based on the principle of legal equality, which stipulates that identical or similar circumstances should be treated in the same manner. Accordingly, even in the absence of an explicit basis in the wording of the legal regulation, pursuant to the principle of legal equality and the principle of ensuring consistency in the legal order, which stipulates that the same or similar situations should be treated in the same manner, the norm in question may be extended in accordance with its meaning and applied to similar situations by analogy.[26] Therefore, analogy comes into question in cases where a statutory provision may be applied to a concrete case by virtue of its purpose, yet not by virtue of its literal meaning. Whether it is possible to apply such an analogy method between AI systems and a sub-agent or auxiliary person will be explored in the rest of the study.

B. Application of the Legal Concept of Sub-Agent by Analogy

In accordance with Article 507 of the TCO, the appointment of a sub-agent refers to the substitution of a person who is legally, economically, and technically independent from the debtor to perform the duty of performance of the debtor-agent. In contrast to an auxiliary person, a sub-agent assumes full responsibility

[20] Semih Yünlü, *Yardımcı Kişilerin Fiillerinden Sorumluluk*, (On İki Levha Yayıncılık, 2019) 109 ff.; Zarife Şenocak, *Borçlunun İfa Yardımcılarından Dolayı Sorumluluğu* (Dayınlarlı Hukuk Yayınları, 1995) 104, 105; Işık Aslı Han, 'Sözleşmenin İfasında Yapay Zekânın Kullanılması Halinde Yardımcı Kişinin Fiillerinde Doğan Sorumluluğa İlişkin Kuralların Uygulanabilirliği' (2024) 2 Galatasaray Üniversitesi Hukuk Fakültesi Dergisi 1305.

[21] In its ruling BGer 4A_305/2021 of November 2, 2021 (E. 7.3.1), the Swiss Federal Supreme Court considered the question of whether an algorithm could directly substitute for an agent (sub-agent) and rejected this notion on the grounds that an algorithm lacks the capacity to have rights. The Court reasoned that the use of a computer equipped with appropriate software as an auxiliary tool does not constitute the substitution of the agent, as such tools do not possess legal personality. The court held that the algorithm in question could not qualify as a sub-agent and consequently concluded that the utilisation of an algorithm does not violate the agent's obligation to perform personally. In legal doctrine also, the significance of the capacity to have rights in the context of a sub-agent has been emphasised. This is because Article 507/3 of the TCO grants the principal the right to directly assert the rights of the agent against the person acting as a substitute for the agent. The purpose of this direct right to assert the agent's rights is to maintain a balance against the agent's waiver of the obligation to perform personally (Josef Hofstetter, *Der Auftrag und die Geschäftsführung ohne Auftrag: Schweizerisches Privatrecht, Bd. VII/2 (Obligationenrecht- Besondere Vertragsverhaeltnisse)* (Helbing Lichtenhahn Verlag, 1979) 98; Fellmann (n 4) BK OR Art. 399 N 93).

[22] In accordance with Swiss doctrine, based on the letter, systematics, and history of Article 101/1 of the Swiss Code of Obligations (similar to TOC Article 116/1), which regulates liability for the acts of auxiliary persons. This doctrine stipulates that the term auxiliary persons encompasses entities that possess the capacity to have rights (Batache (n 2) 96 fn. 576; Weber/Emmenegger (n 12) Art. 101 N 39, 41; Christapor Yacoubian,'Digitale Systeme als «Erfüllungsgehilfen» – Relevanz der fehlenden Rechtsfähigkeit' (2023) 4 AJP 414.).Formun ÜstüFormun Altı

[23] Yünlü (n 20) 172, 173; Han (n 20) 1305; Yacoubian (n 22) 416, 417; Melinda F. Müller, 'Roboter und Recht' (2014) 5 AJP 600; Peter Gauch/Walter R. Schluep/Susan Emmenegger, *Schweizerisches Obligationenrecht, Allgemeiner Teil, Band I und Band II* (11. Auflage, Schulthess Verlag, 2020) N 3091.

[24] Seyfullah Edis, *Medenî Hukuka Giriş ve Başlangıç Hükümleri* (Ankara Üniversitesi Hukuk Fakültesi Yayınları, 1989) 143; Zahit İmre, *Medenî Hukuka Giriş* (3. Bası, 1980) 191-192; Rona Serozan, *Medeni Hukuk, Genel Bölüm, Kişiler Hukuku* (4. Bası, Vedat Kitapçılık, 2013) I § 5, N. 32a; Ali Nazım Sözer, *Hukukta Yöntembilim* (6. Bası, Beta Yayınevi, 2017) 202; Çiğdem Kırca, 'Örtülü (Gizli) Boşluk ve Bu Boşluğun Doldurulması Yöntemi Olarak Amaca Uygun Sınırlama (Teleologische Reduktion)' (2001) 50/1 Ankara Üniversitesi Hukuk Fakültesi Dergisi 99: Franz Reimer, *Juristische Methodenlehre* (Nomos Verlag, 2016) N 555; Markus Würdinger, 'Die Analogiefähigkeit von Normen' (2006) 206 AcP 948.

[25] Würdinger (n 24) 950; Reimer (n 24) N 568; Nurbanu Erzurumlu Işık, *Medeni Usul Hukukunda Yorum-Hukuk Yaratma ve İçtihatı Birleştirme Kararları* (On İki Levha Yayıncılık, 2013) 122.

[26] Batache (n 2) 96; Ernst A. Kramer, *Juristische Methodenlehre* (6. Auflage, Stämpfli Verlag, 2019) 230, 231; Würdinger (n 24) 950.

for the agent's tasks and is thus virtually removed from the agent's direct domain and control.[27] However, the AI systems considered in this study are fundamentally designed to function with minimal digital autonomy and are always dependent on their users. Unlike human agents, user-defined parameters and oversight are nearly the rules for such AI systems. Even when substitutive AI systems perform tasks independently and in alignment with their objectives, these tasks occur within the physician's domain and control. The physician determines the AI system's essential functionality and scope of use in specific circumstances.[28] Despite their capacity for digital autonomy, the utilisation of AI systems is confined within the scope determined by their users, at predetermined times and for predetermined purposes in a specific place.[29] They are not authorised to decide whether a treatment measure should be applied. Instead, AI systems are incorporated within the performance organisation of their users. Consequently, despite their digital autonomy, AI systems lack the requisite independence to be considered as sub-agents.

Another significant characteristic of such a sub-agent is their expertise in the specific field in which they are engaged. In the case of a sub-agent, the agent delegates to a third party the performance of certain acts —or a part thereof—that require special expertise, in order to serve the interests of the principal. In such cases, the agent substitutes a third- party in place of themselves, as distinct from an auxiliary person.[30]

As the doctrine posits, these systems are *"digital slaves, but slaves with superhuman abilities."*[31] In this context, current and near-future AI systems lack the element of independence necessary to qualify as sub-agents. Therefore, the consideration of the interest's approach adopted by part of the doctrine[32] also does not support qualifying AI systems as sub-agents. It is acknowledged that AI systems can offer various advantages for patients and that they may even possess superior specialised knowledge compared to doctors in some cases. Moreover, the utilisation of AI systems serves the physician's interests, as they derive an economic benefit from these systems.[33] Consequently, an AI system that is used for the physician's benefit aligns more closely with the concept of an auxiliary person than that of a sub-agent.[34]

Article 507/3 of the TCO grants the principal the right to directly assert against the sub-agent the rights that the agent holds against them. The purpose of this direct claim right is to establish a balance against the agent's relinquishment of their obligation to personally perform their duties.[35] The protection provided by Article 507/3 becomes particularly meaningful when the sub-agent is economically independent. Therefore, it can be concluded that there is no legitimate reason basis for applying the general provisions set forth in Articles 506 and 507 of the TCO by analogy to cases in which performance is carried out by AI systems.[36]

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[27] Batache (n 2) 97; Tandoğan (n 5) 460; Şebnem Akipek, Alt Vekalet (Yetkin Yayınları, 2003) 113; Şafak Parlak/Levent Börü, 'Alt Vekalet' (2011) 96 Türkiye Barolar Birliği Dergisi 27; Veznedaroğlu, (n 4) 124. In a related decision, the Court of Cassation stated that once an agent has appointed a sub-agent, the agent is not under a duty to supervise or monitor the acts performed by the substitute (Y13HD, 4.5.2009 T., 2008/14169 E., 2009/6003 K.). < www.kazanci.com > accessed May 7, 2025.

[28] Isabelle Wildhaber, 'Eine Einführung in die außervertragliche Haftung für Künstliche Intelligenz (KI)' (2021) HAVE 53; Gerhard Wagner, 'Roboter als Haftungssubjekte? Konturen eines Haftungsrechts für autonome Systeme', in Zivilrechtliche und rechtsökonomische Probleme des Internet und der künstlichen Intelligenz (Mohr Siebeck Verlag, 2019) 2.

[29] Hacker (n 16) 265; Batache (n 2) 97.

[30] Parlak/Börü (n 27) 27; Fulya Erlüle, 'Alt Vekalet' (1999) Prof. Dr. Selahattin Sulhi Tekinay'ın Hatırasına Armağan, 261; Şenocak (n 20) 144; David Oser/Roger Weber, *Basler Kommentar zum Obligationenrecht, Obligationenrecht I, Art. 1–529 OR*, (7. Auflage, Helbing Lichtenhahn Verlag, 2020) Art 398 N 3.

[31] Gunther Teubner, 'Digitale Rechtssubjekte?, Zum privatrechtlichen Status autonomer Softwareagenten' (2018) 218 AcP 156.

[32] Hofstetter (n 21) 98; Fellmann (n 4) BK OR Art 399 N 93; Tandoğan (n 5) 435, 436; Eren (n 4) 1193; Tekinay/Akman/Burcuoğlu/Altop (n 4) 892; Veznedaroğlu (n 4) 121; Parlak/Börü (n 27) 22.

[33] Batache (n 2) 97.

[34] Hofstetter (n 21) 74 ff.; Tandoğan (n 5) 435, 436; Eren (n 4) 1193; Akipek (n 27) 133; Tekinay/Akman/Burcuoğlu/Altop (n 4) 892; Veznedaroğlu (n 4) 121.

[35] Tandoğan (n 5) 474; Gümüş, (n 5) 152-153; Akipek (n 27) 205-206; Eren (n 4) 736; Parlak/Börü (n 27) 38; Veznedaroğlu (n 4) 131.

[36] Han (n 20) 1309.

C. Application of the Legal Concept of Auxiliary Persons by Analogy

Pursuant to Article 116 of the TCO, which regulates the debtor's recourse to an auxiliary person, a person who assists in the performance of an obligation with the debtor's consent and under their instructions qualifies as an auxiliary person. It is not necessary for an employment or dependency relationship between the debtor and the auxiliary person.[37] In the context of Article 116/1 of the TCO, the legal provision does not explicitly define who qualifies as an auxiliary person. The provision merely provides illustrative examples of such auxiliary persons, including cohabitants or employees. According to the widely accepted view, the concept of an auxiliary person is broad: any person who, in the scope of the performance of the contract and with the knowledge and will of the debtor, performs an obligation of the debtor or participates in the performance of an obligation is considered an auxiliary person.[38]

The question of whether the auxiliary person performs the entire obligation or only a certain part of it is irrelevant. Furthermore, there is no requirement for a hierarchical relationship between the debtor and the auxiliary person; that is to say, the auxiliary person does not need to be subordinate to or under the authority of the debtor. Although the relationship between the debtor and the auxiliary person is often contractual, it is not mandatory.[39]

Apart from possessing the capacity to have rights, these conditions also apply in the utilisation of AI systems. AI systems, under the knowledge and will of a physician, are employed for medical treatment purposes—that is, within the scope of contract performance—and are assigned specific tasks for this purpose. It is important to note that AI systems are always integrated into the performance organisation of their users and remain subject to their user's instructions.[40] The digital autonomy of AI systems, which is merely a technical minimal autonomy and does not reach a human-equivalent autonomy capacity, and therefore cannot set their own objectives, is not legally significant. The legal significance lies in the potential for sub-authorisation risks arising from autonomous behaviour, independent of the obligation to set goals.[41]

In this regard, the question of whether an AI system's decisions can be overridden by a human or whether such an arrangement has been foreseen is not decisive. The application of the auxiliary person concept by analogy is primarily intended to determine the physician's obligations. In this respect, the main determinant is that AI systems have their own field of action, unlike traditional systems. The doctor delegates specific decision-making powers to the AI systems, with the option of subsequent review if required.[42] This independent decision-making capability, which is based on the personal characteristics of humans, is a feature of the auxiliary person that distinguishes the debtor's tools that lack such capacity.

In the German legal doctrine, it is argued that the legal concept of an auxiliary person cannot be applied to AI systems by analogy due to their lack of capacity to have rights. The absence of capacity to have rights

[37] Tandoğan (n 5) 436; Akipek (n 27) 131,132; Serozan (n 4) 288; Ahmet M. Kılıçoğlu, *Borçlar Hukuku Genel Hükümler* (26. Bası, Turhan Kitabevi, 2022) 676; İnan/Yücel (n 4) 615; Oğuzman/Öz (n 4) 413-414; Tekinay/Akman/Burcuoğlu/Altop (n 4) 892; Eren (n 4) 1098; Veznedaroğlu (n 4) 120, 121; Melih Arslan, *Türk Borçlar Kanunu Çerçevesinde Yardımcı Kişilerin Fiillerinden Sorumluluğun Sınırlandırılması ve Kaldırılması*, (On İki Levha Yayıncılık, 2020) 14.

[38] Şenocak (n 20) 113; Arslan (n 37) 14; Fatih Gültekin, 'Yardımcı Kişilerin Fiillerinden Borçlunun Sorumluluğu' (2018) 35 Türkiye Adalet Akademisi Dergisi 379; Kılıçoğlu (n 37) 830; Eren (n 4) 1205; Tandoğan (n 5) 436; Tekinay/Akman/Burcuoğlu/Altop (n 4) 892; Oğuzman/Öz (n 4) 418; İnan/Yücel (n 4) 615; Weber/Emmenegger (n 12) Art 101 N 40; Batache (n 2) 98. The Court of Cassation has defined an auxiliary person as anyone who participates in the performance of the obligation with the debtor's express or implied consent. (Y11HD, 22.4.1982 T., 1982/1274 E., 1982/1845 K.) < www.kazanci.com > accessed 7 May 2025.

[39] Kılıçoğlu (n 37) 830, 831; Eren (n 4) 1206; Gültekin (n 38) 379; Arslan (n 37) 14,15; Weber/Emmenegger (n 12) Art 101 N 40; Alfred Koller, *Die Haftung für den Erfüllungsgehilfen nach Art. 101 OR* (Schulthess Verlag, 1980) N 125, 199; Gauch/Schluep/Emmenegger (n 23) N 3021 ff.

[40] Gerhard Wagner,'Verantwortlichkeit im Zeichen digitaler Techniken' (2020) VersR 730; Batache (n 2) 98.

[41] Hacker (n 16) 252-253; Batache (n 2) 99.

[42] Hacker (n 16) 252. Hacker, emphasises that, in the case of non-autonomous, automated systems that only perform pre-programmed tasks, the delegation of decision-making authority cannot be discussed.

cannot be overcome through analogy, as this would implicitly alter the legal status of AI systems and grant them a form of quasi-capacity to have rights (Quasi-Rechtsfähigkeit)[43] and legal personality. However, it is asserted that such a fundamental alteration cannot be a matter of judicial interstitial law-making due to the extensive legal consequences of recognising such a status.[44]

Although the potential meaning of the capacity to have rights as a condition is certainly important, it is also necessary to consider any objections to the application of the analogy method, which require a more detailed evaluation. Within the context of Article 116/1 of the TCO, the capacity to have rights does not have the same meaning in terms of participation in legal transactions, such as representation or agency. What is essential here is the factual conduct of the auxiliary person. The personal liability of the auxiliary person is not expected as a legal consequence.[45]

The purpose of Article 116/1 of the TCO is not to ensure that the auxiliary person is recognised as a person with the capacity to have rights, or that the auxiliary person is considered a co-debtor alongside the debtor vis-à-vis the creditor; on the contrary, its purpose is to ensure the continued responsibility of the existing debtor (who has the capacity to have rights) towards the creditor.[46] It is understood that the purpose of applying the analogy method is to determine the obligations of the physician when using AI systems, rather than to impose obligations on the AI systems themselves. Therefore, within the scope of Article 116/1 of the TCO, there is no necessity to confer any capacity to have rights upon AI systems. Consequently, the lack of a capacity to have rights cannot be deemed an absolute justification for rejecting the application of the auxiliary person concept to AI systems by analogy within the context of Article 116/1 of the TCO.[47] In view of the aforementioned similarities between the concept of an auxiliary person and AI systems, the application of the auxiliary person concept to AI systems by analogy should be accepted.[48]

This conclusion does not entail the granting of full or partial capacity to have rights to AI systems. The extension of the norm through analogy merely implies that AI systems should be regarded as auxiliary persons. The analogy concerns only whether AI systems can be considered a type of digital auxiliary person within the scope of the auxiliary person concept. Ultimately, considering the similarity of conditions between delegating to human auxiliary persons and delegating to AI systems, it is necessary to characterise AI Systems as auxiliary persons under Article 116/1 of the TCO by analogy. Based on this analogy, the question arises as to whether the conduct of AI systems functioning as auxiliary persons may be attributed to the debtor under Article 116/1 of the TCO.

Under Article 116/1 of the TCO, the attribution of an act to the debtor does not require the auxiliary person to be at fault. The issue to be examined in this context is whether the act of the auxiliary person would hypothetically constitute a defect with respect to the duty of care applicable within the framework of the contractual relationship between the debtor and the creditor.[49] If an AI system makes an erroneous decision

[43] *Quasi-Rechtsfähigkeit* is a concept in the legal literature that refers to entities that do not fully possess the legal status of natural or legal persons. This concept is frequently discussed in German law. *Quasi-Rechtsfähigkeit* refers to the limited recognition by the legal system of entities that do not have full legal personality but serve a specific purpose.

[44] See detailed information in: Melinda F. Lohmann/ Theresa Pressler, 'Die Rechtsfigur des Erfüllungsgehilfen im digitalen Zeitalter' (2021) RDi 544; Justin Grapentin, *Vertragsschluss und vertragliches Verschulden beim Einsatz von Künstlicher Intelligenz und Softwareagenten* (Nomos Verlag, 2018) 97.

[45] For the assessment made under Swiss law regarding this issue, see: Batache (n 2) 100.

[46] Lohmann/Pressler (n 44) 545.

[47] Batache (n 2) 101; Lohmann/Pressler (n 44) 545.

[48] Müller (n 23) 600, 601; Widmer Lüchinger (n 15) 13; Teubner (n 31) 186, 187; Batache (n 2) 101; Hacker (n 16) 251 ff.; Melinda F. Lohmann/ Theresa Pressler, 'Algorithmische Vertragserfüllung (Teil 1), Eine zukunftsgewandte Betrachtung des Rechts gurren der Erfüllungsgehilfe n und der Substitutin unter Analyse von BGer 4A 205/2021' (2023) 18 SJZ 887; Yacoubian (n 22) 418; Han (n 20) 1305.

[49] Şenocak (n 20) 210 ff.; Tandoğan (n 5) 444 ff.; Oğuzman/Öz (n 4) 425; Eren (n 4) 1108-1109; Tekinay/Akman/Burcuoğlu/Altop (n 4) 898; Kılıçoğlu (n 37) 677-678; İnan/Yücel (n 4) 616; Gültekin (n 38) 390; Yünlü (n 20) 287; Arslan (n 37) 62. In a relevant decision, the Court of Cassation held that

within the scope of its decision-making authority that results in damage, its conduct must be assessed based on a system-oriented standard. Specifically, it is necessary to assess whether the error could have been prevented by considering the operational capacities and error rates of other AI systems.[50] Courts will evaluate, on a case-by-case basis, whether the erroneous decision made by an AI system would not also occur in other AI systems and, accordingly, whether such a decision may be characterised as a breach of the duty of care or as a breach of contract and a hypothetical fault. In this evaluative process, just as medical expert opinions are consulted, the opinions of technical experts will also need to be sought.[51] The fact that a physician does not have direct influence over the decision-making authority or the relevant design features of an AI system does not preclude liability under Article 116/1 of the TCO. If the delegated task falls within the scope of the obligations undertaken by the physician, it may be attributed to the physician under Article 116/1 of the TCO.

V. The Use of Artificial Intelligence Systems in the Performance of the Medical Treatment Contract

A. General Overview

According to the prevailing opinion, AI systems can be characterised as the addressee of the delegation by analogy to auxiliary persons. In this context, the question arises as to whether the conditions governing the admissibility of task delegation to auxiliary persons should also apply to the use of AI systems. If an analogy method is rejected, AI systems would not be considered addressees of delegation from the outset and consequently, no requirements would arise regarding the use of AI systems from the principle of personal performance obligation and the conditions associated with task delegation under this principle. However, as previously mentioned, the prevailing view is that such a distinction between human auxiliary persons and AI systems is not appropriate.[52]

As previously stated, a physician's personal performance obligation does not preclude the participation of an auxiliary person in fulfilling medical activities, as long as the substantive weight remains with the physician's performance and the auxiliary person's contribution merely supports the physician's execution of medical activities.[53] The auxiliary person's actions must be carried out under the physician's professional supervision and personal responsibility.[54]

These principles should also be considered when AI systems are used as auxiliary persons. The conditions and limitations regarding the delegation of tasks that fall within the core medical activities are particularly significant in cases where AI systems are used. According to the generally accepted view, tasks within these core medical activities cannot be delegated to non-physicians and must be performed exclusively by a

in order for the defendant to be exempt from liability, they have to prove that the damage would have occurred even if they had personally carried out the work performed by the authorised service (Y4HD, 10.04.2020 T., 2000/1199 E., 2000/3287 K.). For further decisions to the same effect concerning the hypothetical defect, see: Y3HD, 23.01.2024 T., 2023/1948 E., 2024/345 K., Y3HD, 10.06.2021 T., 2020/6078 E., 2021/6384 K.) < www.kazanci.com > accessed 7 May 2025.

[50] Hacker (n 16) 264.

[51] Batache (n 2) 177.

[52] Müller (n 23) 601; Teubner (n 31) 187; Widmer Lüchinger (n 15) 13; Hacker (n 16) 251 ff.; Lohmann/Pressler (n 48) 887; Yacoubian (n 22) 418; Han (n 20) 1305.

[53] Vokinger (n 4) N 37; Fellmann (n 4) BK OR Art 398 N 529; Oser/Weber, BSK OR I (n 30), Art 398 N 3; Weber (n 3) Art 68 N 32; Batache (n 2) 103; Aebi-Müller et al (n 10) § 2 N 76.

[54] Aebi-Müller et al (n 10) § 2 N 76; Fellmann (n 4) BK OR Art 398 N 529; Olah (n 7) 167; Peter Derendinger, *Die Nicht- und die nichtrichtige Erfüllung des einfachen Auftrages* (2. Auflage, Universitätsverlag Freiburg, 1990) 107; Weber (n 3) Art 68 N 32; Batache (n 2) 104.

physician.[55] Given the prevalence of numerous AI applications, such as those used in diagnostic imaging, focusing on core medical activities, the question arises as to whether the use of such systems will indeed be permissible. This issue will be examined in the following section.

B. The Use Of Artificial Intelligence Systems In The Core Medical Activities

1. Decision Support Artificial Intelligence Systems

A considerable number of AI systems that are used in practice today are classified as decision support systems. Their developers emphasise that these systems are not intended to replace doctors but rather to provide them with advice or suggestions, thereby functioning as a supplementary source of information.[56] This also applies when a decision support AI system operates in the core fields of medical activity. Although such a system, due to its digital autonomy, may be capable of performing activities independently, the doctor must still assess and verify the activity performed by the AI system in accordance with their own methods and expertise. To illustrate this point, a doctor should review the diagnosis indicated by a decision support AI system and, based on their medical knowledge, determine whether to follow or reject this suggestion.[57] It is important to note that, as core medical tasks are fulfilled by the doctor themselves, the utilisation of decision support AI system applications in core medical activities does not contradict the limitations imposed on the delegation of performance obligations.

In view of the advancing capabilities of decision support AI systems, the validity of the prevailing assumption that the dual execution of activities will invariably be meaningful may be brought into question. Apart from the potential time savings, under such circumstances, almost none of the advantages of AI systems can be fully used. Therefore, the assumption that AI systems merely provide simple decision support will no longer be convincing once it is proven that these systems yield better results than the average doctor in the relevant field of expertise.[58] Consequently, it should also be assessed whether the utilisation of substitutive AI systems in core medical activities will be accepted.

2. Substitutive Artificial Intelligence Systems

Substitutive AI systems are not yet used in medical applications today, at least in Türkiye. However, their utilisation in the future, particularly in diagnostic imaging, seems possible.[59] Contrary to decision support AI systems, these systems are designed to replace physicians, initially in limited areas of practice. Substitutive AI systems are also integrated into the physician's performance organisation and operate under their supervision. Therefore, they are not considered as substitutes for physicians but rather akin to auxiliary persons. In contrast to supportive applications, the physician is not expected to reassume the delegated performance activity; rather, the AI system acts as a substitute for the doctor in the activities within the scope of the delegated tasks.[60]

In this context, a detailed assessment is required to determine whether the delegation of tasks that fall within core medical activities is permissible. The generally accepted view is that tasks considered being core medical activities cannot be delegated to individuals who are not doctors. A physician must exclusively

[55] Chibanguza/Kuss/Steege/Eichelberger (n 14) § 4 I N 30; Olah (n 7) 174; Batache (n 2) 104.

[56] Widmer Lüchinger (n 15) 12.

[57] Batache (n 2) 104-105.

[58] Batache (n 2) 105; Widmer Lüchinger (n 15) 12.

[59] Chibanguza/Kuss/Steege/Eichelberger (n 14) § 4 I N 32; Batache (n 2) 105.

[60] Batache (n 2) 105.

perform such tasks.[61]

It is generally accepted that activities that fall within the core medical activities are those that require medical expertise, which is only possessed by doctors, not by third parties- due to their risk, unpredictability or level of difficulty. The purpose of the prohibition on delegation is to ensure that these sensitive activities are executed in accordance with scientifically proven medical knowledge.[62]

In the coming years, AI systems are likely to outperform the average doctor in certain specialised fields, particularly in tasks that are based on data analysis and thus on comparing large amounts of data. At least in research projects, AI systems have already reached, and in some cases surpassed, the level of precision of medical professionals.[63] If, based on the current state of scientific and technical knowledge, a substitute AI system can be proven to be as competent as, or even superior to, the treating physician based on the current state of scientific and technical knowledge, the question arises as to whether it is justified to exclude such systems from use on the grounds that core medical activities should be performed only by doctors. If such a system can attain the level of expertise possessed by doctors in a specific field of medical activity, there would seem to be no acceptable justification for excluding such AI systems from participation in medical activities.[64] In this case, AI systems could at least be considered within the context of task delegation to an auxiliary person, who is a doctor. This would facilitate the delegation of core medical activities to the AI systems. However, it should be noted that this does not imply that AI systems will eventually replace human doctors entirely. The purpose here is merely to ensure that substitute AI systems are included within the scope of the institution of delegation. Thereby, the utilisation of such systems would not be deemed unlawful per se.[65]

The permissibility of using AI systems in performing core medical activities depends on whether the AI system possesses capabilities comparable to those of doctors or ensures an equivalent level of safety and quality of care for the patient. If the AI system cannot produce results equivalent to those obtained by a doctor, its deployment in core medical activities should be prohibited, just as non-doctors are not permitted to be appointed as sub-agents.[66] However, once equivalence has been demonstrated, its utilisation may become possible under certain conditions. The question of whether a system has achieved a sufficient level of equivalence should be primarily assessed by medical professionals, with input from relevant technical disciplines when necessary.[67] Regardless of the degree of equivalence, the utilisation of AI as a substitute in core medical practice may be possible, provided that the patient has been adequately informed in advance about the characteristics and risks of the system and has explicitly consented to its utilisation. Furthermore, in such instances, the utilisation of AI as a substitute may be feasible, provided that there is no legal impediment to delegating the performance of the obligation.

[61] Chibanguza/Kuss/Steege/Eichelberger (n 14) § 4 I N 30; Olah (n 7) 174; Batache (n 2) 106; Thanos Rammos/Karolina Lange-Kulmann/Johanna Charlotte Clausen, *Künstliche Intelligenz und Robotik, Rechtshandbuch* (C.H.Beck Verleg, 2020) § 28 N 42.

[62] Rammos/Lange-Kulmann/Clausen (n 61) § 28 N 38; Olah (n 7) 171, 174; Claudia Achterfeld, *Aufgabenverteilung im Gesundheitswesen, Rechtliche Rahmenbedingungen der Delegation ärztlicher Leistungen* (Springer Verlag, 2014) 45; Batache (n 2) 106

[63] Wolfgang Ertel, *Grundkurs Künstliche Intelligenz, Eine praxisorientierte Einführung* (5. Auflage, Springer Verlag, 2021) 13; Katrin Helle, 'Intelligente Medizinprodukte: Ist der geltende Rechtsrahmen noch aktuell?' (2020) MedR 993; Batache (n 2) 107.

[64] Batache (n 2) 107.

[65] Chibanguza/Kuss/Steege/Eichelberger (n 14) § 4 I N 32; Batache (n 2) 107.

[66] Batache (n 2) 108.

[67] Chibanguza/Kuss/Steege/Eichelberger (n 14) § 4 I N 32; Batache (n 2) 108.

Conclusion

The treatment relationship is still characterised today by the patient's trust in the physician and their skills. This trust causes the principle of the physician's personal performance obligation. However, in modern medicine, which is based on the division of labour, the physician is not required to personally fulfil all obligations. It is generally accepted that certain tasks may be delegated to sub-agents or auxiliary persons. The delegation of tasks to sub-agents must comply with the conditions set forth in Article 506/1 of the TCO. Conversely, delegation to auxiliary persons is permissible only if the primary responsibility for the performance obligation remains with the physician. However, it should be noted that the general acceptability of delegation is subject to certain limitations. In particular, activities classified as core medical tasks may only be delegated to physicians. The core field of medical practice generally includes activities that require specialised medical expertise due to their complexity, risks, or unpredictability. As a result, the restriction on the delegation of tasks to non-physicians becomes reasonable.

Explanations regarding the potential fields of activity of AI systems reveal that these systems are particularly designed for core medical practices, such as diagnosis and treatment. In light of the capacity of AI systems' ability to autonomously analyse and perform tasks, as well as their potential to serve as substitutes, it appears necessary to impose limitations on the delegation of tasks to AI systems in order to protect patients. The principles of task delegation should be applied regardless of whether the risks arise from a task being performed by a human or by a digital autonomous AI system replacing an auxiliary person. This is because when a physician uses AI systems, even if they supervise the process afterward, they relinquish certain decision-making authorities and transfer them to the system.

The lack of economic independence of AI systems concludes that they cannot be considered as sub-agents. However, it is possible to apply the concept of an auxiliary person to AI systems by analogy. In this regard, the fact that AI systems do not possess the capacity to have rights does not constitute an obstacle to such an analogy. On the contrary, this approach ensures that AI systems are integrated into the delegation of tasks in accordance with its principles. In this context, when a physician uses AI systems, they must comply with the requirements for the proper delegation of medical tasks. There are no restrictions on the utilisation of decision Support AI systems, as the physician evaluates and supervises the decisions of these systems based on their own knowledge, thereby fulfilling the delegated task themselves. If AI systems are used for this purpose, their utilisation in core medical practice is also acceptable.

In contrast, one perspective argues that substitutive AI systems should not be used in core medical practice on the grounds that such activities must necessarily be performed by a physician. However, the outright rejection of the possibility of delegating tasks to such systems is not a satisfactory solution. Core medical practice encompasses tasks that require specialised medical expertise due to their complexity, risks, or unpredictability. The purpose of limiting delegation is to ensure that actions within these critical fields are based on scientifically validated medical knowledge. In this context, in order to protect the interests and health of patients, the utilisation of substitutive AI systems should be accepted if it is proven that, according to the current state of science and technology, they can achieve results that are at least as good as, or better than, those attainable by a physician.

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