The Uncertainty of Aviation Safety and Aviation Security in Relation to Human Rights: Philosophical Aspects of Legal Definitions

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The article discusses the uncertainty of legal definitions of aviation safety and and aviation security, the implementation of which often result in certain restrictions of human rights. In the article, a hypothesis is made that, despite usually treated as well-known concepts, safety and security are not so clear and well-defined, often leaving the reader to guess at their precise meaning. The aim of this article is to identify the core features that characterise aviation safety and aviation security and could disclose their legal content when assessing their comparative weight in relation to the protection of human rights. Supported by holistic approach from different perspectives (socio-cultural, historical, etc.), the phenomenological and hermeneutic analysis allowed providing an in-depth understanding of various meanings of safety and security concepts. An overview of the existing linguistic peculiarities of the use of the terms 'safety' and 'security' with an emphasis on the importance of determining the context in which they are used as primary evidence of their meaning is followed by the analysis of the common features and differences between the concepts of safety and security that supplements the discourse on the dilemma of combining subjective and objective, relative and absolute perceptions of safety and security. The research from the view point of normative jurisprudence reveals the polysemy inherent in aviation safety and aviation security, especially in terms of the values they represent, suggesting the conclusion that legal definitions of 'aviation safety' and 'aviation security' should in part be treated as a sort of *ad hoc* definitions, which have to be developed (clarified) in each particular case.

Keywords: aviation safety; aviation security; legal content; holistic approach

INTRODUCTION

Safety and security are essential for the successful functioning and development of modern civil aviation. Given the continuously emerging new threats, various intrusive measures, e.g., passenger body scanners, CCTV cameras, bio-scanners for automated passenger registration systems, an air traffic management system controlled by artificial intelligence (AI), etc. are used to maintain high standards of aviation safety and security. The implementation of such

technologies often leads to certain restrictions on human rights, such as the right to privacy, personal data protection, freedom of movement, non-discrimination, and the like.

However, legal definitions of aviation safety and aviation security are vague, making it challenging to properly assess their comparative weight in relation to the protection of human rights and to determine where the line should be drawn between human rights restrictive safety and security measures that are necessary and those that are disproportionate. Despite being often treated as well-known concepts, safety and security are not so clear, and due to such vagueness, these concepts can be potentially abused and manipulated as objective grounds to justify restrictions of human rights. To mitigate this tension, it is essential to have a clear and well-defined understanding of what the notions of aviation safety and aviation security represent. Therefore, the aim of this article was to identify the core features that characterise them and could help to disclose their legal content by using phenomenological and hermeneutic analysis supported by holistic approach from different perspectives (socio-cultural, historical, etc.).

The issues regarding the meaning of the terms 'safety' and 'security' attract the attention of researchers in various fields and disciplines. Wolfers (1952) analysed security in the light of policy agendas of nation-states. Baldwin (1997) sought to disentangle from this perspective and to focus on the analysis of the security concept itself. In his book *Security*, Zedner (2009) engaged in academic debates from the perspectives of criminology, law, international relations, politics, and sociology. Möller et al. (2006) elaborated a comprehensive philosophical analysis of the concept of safety; in his later research, Möller (2012) focused on safety in the context of societal decision-making. John (2011, 2019) delved into security in terms of an individual's well-being, while Herington (2015) sought to re-ignite the fading philosophical interest in security by uncovering the ways in which this concept had been both understood and misunderstood. Kononov and Zhukov (2020) searched for the ways to conceptualise modern philosophical notions of security in the globalising culture system. Boholm et al. (2016) conducted linguistic research on the application of terms 'safety' and 'security' based on empirical observation of their use in everyday language. Hansson (2012) resorted to philosophical discourse to analyse linguistic practice and terminological predicament of the use of the term 'safety'. Some authors dedicated their research to address the common features and differences between safety and security with the aim of reconciling possible conflicts and exploring the potential for their convergence (Kriaa et al. 2015; Line et al. 2006; Piètre-Cambacédès and Bouissou 2013), others investigated the demarcation line between safety and security (Jore 2019). However, the uncertainty of the definitions of aviation safety and aviation security is not receiving sufficient attention. In this article, a holistic approach is taken and the analysis is based on various studies into the concepts of safety and security conducted in diverse scientific fields that would facilitate identification of the core features that characterise aviation safety and aviation security. The research follows the approach of normative jurisprudence (Bentham 1843; Mill 1906; Rawls 1964; Raz 1979), outlining the value aspects that the concepts of safety and security embody.

THE INTERNATIONAL NATURE OF CIVIL AVIATION: LINGUISTIC TRAPS

Since 1951, when the International Civil Aviation Organization (ICAO) established English as the international aviation language to improve consistency, accuracy, and effectiveness of communication between pilots and air traffic control officers, it is *de facto* the main language in aviation and is often regarded as its *lingua franca* (Alderson 2009: 168; Boschen, Jones 2004: 291; ICAO 2001a: 5–3; ICAO 2003). For the aim of this article, it is important that in the English language, there are two separate words to define the concepts analysed: safety and security.

The ICAO defines aviation safety as

the state in which risks associated with aviation activities, related to, or in direct support of the operation of aircraft, are reduced and controlled to an acceptable level; the state in which the possibility of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and risk management' (ICAO 2001b, 2011b, 2016, 2018).

Aviation security is defined as

safeguarding civil aviation against acts of unlawful interference; this objective is achieved by a combination of measures and human and material resources' (ICAO 2011a).

However, these definitions are quite vague and require deep understanding, primarily of the meaning of the cornerstone terms 'safety' and 'security'.

The English term 'safety' is mainly described as:

(1) freedom from harm or danger;

(2) the quality of not being dangerous or harmful;

(3) a place that is free from harm or danger (a safe place).

The common definitions of the term 'security' are:

(1) the state of being protected or safe from harm or danger;

(2) protection or defence against something bad that might happen: things done/precautions taken to make people or places safe, something that gives or assures protection;

(3) the area or a place where people are checked to make sure they are not carrying weapons or other illegal materials.[1]

Since other definitions of safety and security[2] are less frequent or irrelevant for the aim of this article, they will not be discussed.

In general, three main aspects can be distinguished from the definitions of safety and security: (1) *a state or a feeling* (not being in danger), (2) *a quality* (not being dangerous or providing protection), and (3) *a place* (which is free from danger). It is evident from the ICAO definitions that safety and security in aviation are directly perceived in the first two meanings, i.e., as a state and a quality. However, the third meaning is also relevant as it reflects a certain place where such a state (a quality) is ensured (e.g., an airport). Thus, aviation safety and aviation security should be regarded holistically, as representing all those meanings.

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[1]   For the said definitions of 'safety' and 'security', see, for example, https://www.merriam-webster.com/dictionary/safety, https://www.oed.com/search/dictionary/?scope=Entries&q=safety, https://www.merriam-webster.com/dictionary/security, and https://www.oed.com/search/dictionary/?scope=Entries&q=security.

[2]   E.g., 'safety' as a locking or cutoff device that prevents a gun from being fired accidentally or a machine from working by accident; 'security' as something given, deposited, or pledged to make certain the fulfilment of an obligation, etc.

Another issue is that linguistically, safety and security are often regarded as synonyms,[3] and despite the fact that there is a clear distinction made between these two terms in aviation, it is quite common to use them as synonyms in everyday language (Boholm et al. 2016: 329, 331; Line et al. 2006: 2). This may lead to serious miscommunication among aviation professionals and the general public, when the latter may interpret these terms in the incorrect meaning. Even more so is in the case of non-native English speakers, as in some national languages only a single word refers to both terms, e.g., German (*Sicherheit*), Spanish (*seguridad*), Italian (*sicurezza*), Norwegian (*sikkerhet*), Portuguese (*segurança*), Danish (*sikkerhed*), etc. This is an issue also among aviation professionals, regardless of their proficiency in English; as various research in psychobiology show, our mother tongue is the language we usually use to think and feel emotion (Proverbio et al. 2009 cited by Guvercin 2015).

Due to the said linguistic peculiarities and given the international nature of aviation, a certain level of uncertainty regarding the meaning of the terms 'safety' and 'security' is unavoidable. Legal researchers (Piètre-Cambacédès, Chaudet 2010: 56) define these 'linguistic traps' as one of the main reasons causing the ambiguity when using the terms of aviation safety and security. Thus, it is not enough to rely solely on linguistic interpretation of these concepts.

CONTEXTUALISATION OF SAFETY AND SECURITY

The use of language is realisation of linguistic elements in a context. Therefore, the context of a word is considered as one of primary evidence of its meaning (Boholm et al. 2016: 322). Depending on these contexts, the meaning of 'safety' and 'security' may vary considerably.

Firstly, the professional context must be taken into account, because in a complex system such as aviation, which is highly specialised, with discretely designed and specialised roles (e.g., pilots, technicians, engineers, air navigators, security officers, etc.) and even more specialised functions under each role (Pettersen, Bjørnskau 2015: 170), the collaboration of individuals from different professional communities is crucial. Piètre-Cambacédès and Chaudet (2010: 55) observe that, for example, to an electrical engineer, the meaning of safety and security may significantly differ from what these words mean to a computer scientist. In addition, as civil aviation is a means of transportation and primarily of passengers, aviation professionals inevitably have to interact with representatives of various other professions who have nothing in common with it. So, when it comes to human rights restrictive aviation safety and security measures, the perception of these concepts cannot be strictly limited to the perspective of aviation-related professions.

The perception of safety and security also varies due to social and cultural contexts, which are not static and tend to change over time. With the emergence of modern aviation, international travel of various social groups from different cultures became common, whereas different societies developed different standards and understanding of what safety and security mean in terms of values they seek to protect because of differences in their history and culture (Quddus et al. 2020: 36). Each of those societies are comprised of individuals with different social status, whose perception of general values that underly safety and security also varies because of their different needs.[4] Therefore, safety and security can be defined as 'umbrella terms' that conceal a very diverse array of social and cultural values (Zedner 2009: 9–12). To some extent, this is reflected in the ICAO definitions of aviation safety and security,

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[3]   See, for example, https://www.merriam-webster.com/dictionary/safety#synonyms.
[4]   See, for example, Maslow's theory of the hierarchy of needs.

which abstractly identify persons and property, or civil aviation itself, as values to be protected, and that can include virtually anything.

As pointed out by Mill (1906: 12–13), the only purpose for which power can rightfully be exercised over other members of a civilised community is to prevent harm to others. Meanwhile, something is regarded as a threat to be secured against only if it raises the prospect of depriving someone of something they value. Hence the value aspects that the concepts of safety and security embody allow justifying the human rights restrictive measures, and people from different cultures and social groups may recognise and prioritise not only different values, the protection of which in their view should be sought by aviation safety and aviation security measures, but also express different views towards their comparative weight in relation to certain human rights restrictions.

In such a dynamic sector as aviation, the historical context becomes highly relevant due to constantly emerging new threats and changes in public discourse on those threats at the relevant time, as was the case, for example, after 9/11 terrorist attacks in the US, after which multiple human rights restrictive security measures were immediately introduced in aviation and widely accepted by the public; it is highly unlikely they would be possible before those attacks took place. At the early stages of modern civil aviation, safety was generally focused on people (aircraft pilots, crew members, passengers, air traffic control personnel, etc.), urging them to behave safely, but later more and more attention was paid to the technical safety of the aircraft systems (Miller 1988: 57–58). As with security, technological advances have led to an increasing focus on protecting not only against physical threats but digital threats as well. Hence the meaning of safety and security is usually a view about what safety and security requires at a particular time (in the way of legal or political measures) (Waldron 2006: 455). According to Herington (2015), who provided a chronological analysis of the meaning of the term 'security', the opacity of security is partly 'the result of a complex etymological history and a corresponding proliferation in contemporary definitions of what it means to be secure' (Herington 2015: 22–29).

The contextualisation of the use of the terms 'safety' and 'security' reveals their multifaceted nature, the polysemy inherent in them, which makes it hard to specify their definitions *a priori*. Therefore, it seems that these contexts must be thoroughly analysed each time, in order to disclose the legal content of the notions of aviation safety and security in a certain given situation.

SIMILARITIES AND DIFFERENCES BETWEEN AVIATION SAFETY AND AVIATION SECURITY

Treating safety and security as synonyms (especially in everyday language) is not completely unfounded: it mainly comes from the commonalities shared by them.

Both safety and security deal with risks, result in constraints, involve protective measures, and create requirements (Eames, Moffett 1999 cited by Kriaa et al. 2015: 158). Aviation safety and security imply guarding against dangers which are essentially 'negative' (i.e., attacks, accidents), in contrast to desired outcomes, which are essentially 'positive' (i.e., service delivered) (Piètre-Cambacédès, Bouissou 2013: 114). That is why aviation safety and security are often regarded as the opposite (the antonym) of risk, when a higher degree of safety and (or) security means a lower risk and vice versa (Boholm et al. 2016: 322; Möller 2012: 60). In fact, the term 'risk', which can be defined as a multiplication of probability and harm (Piètre-Cambacédès, Bouissou 2013: 113), meaning that safety and security increase as the probability of harm or its severity decreases (Misumi, Sato 1999: 137), is very common in the definitions of both safety

and security. Many researchers also agree that safety and security measures often involve a sort of trade-offs (i.e., constraints applied), including various interferences with the human rights.

Although closely related, safety and security should not be regarded as the same side of the same coin. Conducted by Piètre-Cambacédès and Chaudet (2010: 58–59), a lexicographical analysis of the definitions of safety and security in various industrial sectors, including aviation, reveals that definitions of security use about half the vocabulary of what is used to define safety. According to the authors, it indicates that the definition of safety is more generic (broader) in comparison to security. It is also evident that there are far more variations of different definitions for security than for safety, based on which some authors conclude that there is a greater consensus on the meaning of safety than on the meaning of security (the former is less contested) (Line et al. 2006: 2).

The vocabulary used in the definitions of safety and security also varies. It usually refers to accidental causes in the definitions of safety (harm, injury, accident, hazard, etc.), while the definitions of security often refer to malicious and voluntary actions (sabotage, malicious, unlawful, etc.). In addition, there is a difference in the use of words describing the interaction between the system evaluated and the environment. The words 'system' and 'environment' are used with almost equal frequency in the definitions of safety, illustrating the possible negative impact of the system under consideration on the environment, while the word 'environment' is almost not present in the security definitions, but instead the singular and plural forms of the word 'system' are used in parallel, illustrating the possible negative impact from surrounding systems on the system under consideration (PiètreCambacédès, Chaudet 2010: 58–59).

Safety threats are usually internal, while security measures are primarily aimed at preventing external threats. In the system-environment interaction, safety focuses more on the system itself in order to protect the environment surrounding it, while security, on the contrary, is primarily focused on the threats arising from the environment surrounding the system (i.e., other systems) in order to protect the system under consideration. This is evident in the ICAO definitions of aviation safety and aviation security, and these differences in the origin and nature of safety and security threats, as well as the interaction between the system under consideration and its surrounding environment when applying safety and security measures, could serve as a basis for demarcation between aviation safety and security.

However, the different origin and nature of safety and security threats also lead to a certain variance when evaluating their comparative weight in relation to human rights protection. Because of the nature of the threats safety risks are generally well known, as they are related to certain (often static) common system or human characteristics (e.g., potential failures of aircraft engines or other mechanisms, computer systems, fatigue of pilots and cabin crew or ground handling personnel, etc.), which can be identified and assessed with sufficient accuracy based on historical data and various practical tests (empirical studies). Therefore, the variety of possible safety incident scenarios can be narrowed down (Piètre-Cambacédès, Bouissou 2013: 115), and the measures to fight such threats can be objectively justified. Meanwhile, security risks are usually related to a potentially unknown (external, as a rule) actor (or a threat source) that can act spontaneously, i.e., carry out attacks that are difficult to predict in advance, and therefore include an extremely wide range of possible security incident scenarios (Kriaa et al. 2015: 159; Pettersen, Bjørnskau 2015: 169). Due to the lack of objective data when evaluating intentional malicious acts, the probability of these events is usually considered as 100%, because various security measures reduce not the probability of their occurrence, but only the probability of their success in causing harm (Line et al. 2006: 3).

These difficulties in assessing security threats allow for a great deal of subjectivity and are more likely to cause irrational and paranoid behaviour in comparison to safety risks, which are more suited to objective or at least rational reasoning (Piètre-Cambacédès, Bouissou 2013: 116). Moreover, as the malicious nature of security threats means that these attacks are usually well organised and directly aimed at 'bypassing' the existing security measures (Pettersen, Bjørnskau 2015: 167), a certain degree of secrecy is inherent in aviation security, which makes it even harder to objectively examine the justification of such measures. Nevertheless, one cannot ignore that a certain degree of secrecy is inevitable in order to maintain the effectiveness of security measures, and somewhat subjectivity in this regard will always be present. This brings us to the dilemma of objective and subjective perception of safety and security.

PHILOSOPHICAL AND PSYCHOLOGICAL DIMENSION: OBJECTIVE VS. SUBJECTIVE PERCEPTION OF SAFETY AND SECURITY

Safety and security aim to manage the existing risks and protect the values from possible threats arising to them. In general, however, the probability of a risk is subject to epistemic uncertainty (Möller et al. 2006: 421). It can be perceived in two ways, objectively and subjectively. From an objectivist point of view, probability is based on the frequency of the repetition of a certain event in a set of relevant data, whereas from a subjectivist point of view, probability is a certain measure (a degree) of internal belief or hope based on available general knowledge about the investigated phenomenon and its causes, but not confirmed by objective data. However, the subjectivist perception of probability is unavoidable, especially when dealing with security threats, because due to their nature, there is no or a very limited scope of objective historical data about such threats, based on which strictly formalised probabilistic calculations could be performed.

In the objective sense, safety and security mean the absence of threats to acquired values, and in the subjective sense, only the absence of fear that such values will be threatened (even if threats to these values may exist objectively) (Wolfers 1952: 485). In this regard, John (2019: 182–184) made a distinction between fact-relative and belief-relative security. The subjectivist (or belief-relative) perception in a sense illustrates the psychological dimension inherent in the notions of aviation safety and aviation security. From this perspective, safety and security inevitably have the connotation of assurance as a personal feeling, because from this point of view, a safe state is perceived not when a person's safety and security are objectively ensured but when the person themselves realises it consciously, even if objectively it may not be the case. This corresponds to the Roman and medieval usage of the Latin *securitas*, the direct etymological antecedent of 'security', which referred primarily to 'a serene state of mind' (Arends 2008: 269), 'a sense of internal calm and freedom from fear' (Herington 2015: 24–25).

To some extent, the subjective perception of safety and security also reflects the well-being of others, because people tend to think of safety and security not just momentarily but as projected into their future; thus, at some levels, they are concerned about the safety and security of others, as a projection of possible future events that allows them to predict their own destinies (Waldron 2006: 495). Hobbes (1998), who is considered the pioneer of the modern concept of security, identified security as the main objective of the sovereign's existence, describing it as the sovereign's duty to make every effort to ensure the welfare of as many people (subjects) as possible for as long as possible, although he mostly referred to the physical dimension. In this sense, safety and security are understood as majoritarian concepts. However, he acknowledged, that '[b]y safety one should understand not mere survival in any condition,

but a happy life so far as that is possible' (Hobbes 1998: 143). Thus, the effect of security is not merely physical but also 'an emotional state of calm assurance' (John 2019: 184).

Fear, as a psychological dimension, can be completely disproportionate to the actual probability of the events that frighten us; it is often irrational and can have an unreasonably negative impact on the assessment of the safety and security situation (Waldron 2006: 467–468, 496–497). People tend to overestimate and overreact to the risks of unlikely incidents that are quite rare but well publicised in media, such as aviation incidents (Mironenko-Enerstvedt 2017: 120).[5] Thus, fear of threats that is common to the subjective perception of safety and security is in itself a thing to be feared of, and an objective perception of safety and security is necessary in order to tackle real (rather than imagined) threats (Baldwin 1997: 14; Möller et al. 2006: 420; Zedner 2009: 14–19).

On the other hand, it is understandable that each person wants not only protection for his or her life, health, possessions, etc., but also freedom from fear of possible threats to these values (Waldron 2006: 466–467). Thus, Bentham's (1843) formulation of security as providing certainty of expectations, by grasping the sense of security as an assurance or a guarantee, emphasised the need to maximise predictability 'so that decisions made today might be fulfilled tomorrow' (Zedner 2009: 28–29). The empirical study conducted by Ellsberg (1961 cited by Möller et al. 2006: 421–422) confirms that in certain situations, people tend to prefer an option with lower uncertainty (i.e., lower risk, which means lower probability of harm) even if expected value gained in such event is lower in comparison to a situation with a higher degree of risk. Therefore, it is important to understand how the individual and society accept risk (Quddus et al. 2020: 36); people's fear cannot be completely ignored and must be treated as significant for aviation safety and security (Waldron 2006: 468–469), meaning that to a certain degree, safety and security measures must assuage those fears, even irrational ones (Pettersen, Bjørnskau 2015: 169).

Although the subjective perception of aviation safety and security enriches the objective perception of these notions, people's willingness to make sacrifices (trade-offs) in favour of lower risk poses a serious threat of abuse. The subjective perception can lead to the justification of various disproportionate human rights restrictive measures that can impose additional burden on human rights without objectively improving (or with little improvement) of actual state of aviation safety and security (Zedner 2009: 19). Such a perception is dangerous and must be subject to scrutiny; it should be reduced to the lowest possible level in disclosure of legal content of the notions of aviation safety and security, seeking the maximum objectivity.

According to Möller et al. (2006: 427), the closest we can get to objectivity is a safety and security concept that is intersubjective in two respects: (1) it is based on the comparative judgments of severity of harm that the majority would agree on, and (2) it makes use of the best available expert judgments on the probabilities and uncertainties involved. This concept relies on the approach that safety and security are essentially about achieving the best possible results, i.e., not to absolutely eliminate the possibility of threat/harm, but to reduce it to an acceptable level. Such an approach reveals the difference between relative and absolute perception of safety and security.

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[5]   For example, after 9/11 terrorist attacks in the US, people started avoiding air travel, despite significantly increased focus on aviation security reducing the threat of such attacks to a level even much lower than before, which eventually led to business failures and bankruptcies of air carriers, travel agencies, etc.

ABSOLUTE AND RELATIVE PERCEPTIONS OF SAFETY AND SECURITY

One of the major issues in relation to legal definitions of aviation safety and security is the question 'how safe is safe enough?', which may seem as more of a philosophical question (Quddus et al. 2020: 36). Everyone perceives safety and security differently. Some people are willing to take a higher risk, while others avoid even the slightest possibility of risk, so the perception of the level at which safety and security are achieved can vary significantly.

The adjectives 'safe' and 'secure' both have comparative (safer/more secure) and superlative (the safest/most secure) degrees. The latter is relevant when defining safety and security in an absolute sense. In this sense, safety and security are perceived as 'all or nothing' concepts and mean complete absence of any risks – a 100% safe state, although legal researchers draw attention to the problematic nature of such a perception, pointing out that absolute safety and security in an objective sense are unattainable (Möller et al. 2006: 426–427). Meanwhile, the comparative degree reflects the relative perception of safety and security. In this sense, safety and security mean only reduction and (or) control of risk to a certain (acceptable) level (Hansson 2012: 1524; Möller 2012: 61).

In general, safety and security can be described through a variable scale of the risk level, ranging from risk free to the unacceptable (intolerable) level of risk. At a certain point on this scale, a limit at which a state of safety and security is achieved can be drawn, depending on which perception of safety and security is accepted, absolute or relative. In the case of the absolute perception, such a limit is clear: it is at the very end of this scale, meaning that every situation even with the slightest possibility of risk is considered unsafe or insecure, i.e., intolerable. However, absolute safety and security is hardly attainable in real life. Nevertheless, it does not mean that the absolute perception must be rejected as false or unacceptable. In this sense, safety and security can be perceived not as a final result but as a continuous (never-ending) process, which must be constantly revised in the light of emerging new threats. Such an approach enriches the understanding of safety and security, allowing the inclusion not only of the desired state but also of the very process that aims to create and maintain the corresponding state in their legal content (Jore 2019: 168). This approach is evident in the ICAO definitions of aviation safety and aviation security, along with the aim to reduce the risks to an acceptable level emphasising its further control and maintenance at or below that level, through a continuing process of risk management.

Determining the limit at which a state of safety and security is achieved in the relative sense is more problematic as it can be drawn virtually at any point of the scale. This limit marks the so-called 'acceptable level of risk', which is also used in the ICAO definitions, meaning that situations above this limit, although not risk free, but are accepted as safe and (or) secure, and it would be misleading to use the terms 'safety' and 'security' below the discussed level (Möller et al. 2006: 429). However, it greatly depends on the individual's approach to the values to be protected, is therefore exposed to subjective evaluations (Hansson 2012: 1524–1525), and can potentially be abused by manipulating the category of 'acceptable level of risk' within the scale of risk.

Relying on various definitions of safety and security, two cases can be distinguished when safety and security are supposed to exist: (1) when nothing threatens the acquired values, and (2) when such threats exist, but there are available means to protect against them at a reasonable cost (Miller 2001: 16 citing Ayoob 1995, Baldwin 1997, Wolfers 1962). This allows clarifying another important criterion of reasonable (in other words, acceptable) costs. In this

sense, a cost-benefit analysis is essentially carried out when the ratio between the reduction of the risk and the costs incurred to achieve this reduction (i.e., money, time, resources) is assessed. In aviation, the risk is considered as acceptable or tolerable if (1) its further reduction is unfeasible or the costs of such reduction would be disproportionately high in relation to the improvement in safety and security achieved, and (2) society is willing to accept this risk in order to obtain benefits from activities related to such risk (ICAO 2018).

The latter condition is closely related to the psychological dimension of safety and security as value-driven concepts – it depends on people's willingness to make certain trade-offs and urges the need to evaluate various contexts that influence society's acceptance of risk. Meanwhile, the first condition is greatly dependant on the existing differences between safety and security. As already mentioned, safety risks are usually easier to predict and often have more historical data on which objective evaluations can be made in advance, both in terms of the probability of their occurrence and the gravity of a possible damage. Safety incidents can therefore be divided into different levels of danger, which allows drawing a limit beyond which such incidents are considered unacceptable; meanwhile, security threats are more difficult to predict as they materialise less often and there is less historical data about them, based on which objective evaluations could be made in advance. Thus, there are very limited possibilities to differentiate security incidents by their level of danger based on objective criteria. As a result, in the case of security, the threshold of acceptable risk moves closer to the absolute value (i.e., the aim of complete elimination of the threat or its ability to cause damage) in comparison to safety risk, which can be more often assessed as tolerable.

To conclude, both absolute and relative perceptions of safety and security, although they cannot be combined into one, are closely related. Neither of them (i.e., absolute and relative perceptions of safety and security) can be completely eliminated without invalidating important elements of the meaning of safety and security.

CONCLUSIONS

The article reveals that many aspects must be considered to fully understand the legal definitions of 'aviation safety' and 'aviation security' and to prevent abuse and unreasonably broad interpretation of these notions, especially when relying on them as objective grounds to justify human rights restrictive measures. These include the existing linguistic peculiarities of the use of the terms 'safety' and 'security', the context in which they are used (e.g., professional, social, cultural, and historical), the major differences between the concepts of safety and security, as well as the dilemma of combining subjective and objective, relative and absolute perceptions.

Different implications of safety and security are firmly rooted in society and thus cannot be neglected. Despite the polysemy inherent to them, identification and a thorough analysis of these core features that characterise safety and security provide a better-defined understanding of the actual meaning of aviation safety and security. If not disclosed transparently, they can result in diverse perceptions of aviation safety and aviation security, leading to contradictory approach towards them as legal values and a legitimate aim to interfere with human rights.

While consensus on precise conventional (generally accepted) definitions of 'aviation safety' and 'aviation security' is difficult to achieve because of the impossibility to precisely formalise inherently multifaceted concepts, especially because of the value-laden nature of these concepts, such abstract definitions as those contained in ICAO documents are not sufficient. Each particular case requires a clarification for these definitions by assessing the aforementioned aspects and transparently disclosing the values that a certain aviation safety and (or)

aviation security measure seeks to protect, the threats, and the extent (level) of protection. This means that legal definitions of 'aviation safety' and 'aviation security' should in part be regarded as a sort of *ad hoc* definitions that have to be developed (clarified) on a case-by-case basis.

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SAULIUS STONKUS

Aviacijos saugos ir aviacijos saugumo neapibrėžtumas žmogaus teisių atžvilgiu: teisinių apibrėžimų filosofiniai aspektai

Santrauka

Straipsnyje analizuojamas aviacijos saugos ir saugumo, kurių įgyvendinimas dažnai lemia tam tikrus žmogaus teisių ribojimus, teisinių definicijų neapibrėžtumas. Keliama hipotezė, kad sauga ir saugumas, nors ir traktuojami kaip gerai žinomos sąvokos, nėra tokie aiškūs ir tiksliai apibrėžti, todėl skaitytojui dažnai tenka spėlioti tikslią jų reikšmę. Straipsnio tikslas – nustatyti esmines aviacijos saugai ir saugumui būdingas savybes, kurios leistų atskleisti jų teisinį turinį vertinant šių koncepcijų lyginamąjį svorį žmogaus teisių apsaugos atžvilgiu. Fenomenologinė ir hermeneutinė analizės, paremtos skirtingų perspektyvų (sociokultūrinės, istorinės ir kt.) holistiniu požiūriu, leido pateikti gilų įvairių saugos ir saugumo sampratų reikšmių suvokimą. Apžvelgus lingvistinius terminų „sauga" ir „saugumas" vartojimo ypatumus bei atkreipus dėmesį į konteksto, kuriame jie vartojami, svarbą identifikuojant jų reikšmę, straipsnyje pateikiama saugos ir saugumo sampratų bendrų bruožų ir skirtumų analizė, kuri papildo diskursą apie subjektyvaus ir objektyvaus, santykinio ir absoliutaus saugos bei saugumo suvokimo darnos dilemą. Normatyvinės jurisprudencijos požiūriu atliktas tyrimas atskleidžia aviacijos saugai ir saugumui būdingą polisemiją, ypač jų vertybinio turinio prasme, suponuojančią išvadą, kad teisiniai „aviacijos saugos" ir „aviacijos saugumo" apibrėžimai iš dalies turėtų būti traktuojami kaip tam tikros *ad hoc* definicijos, kurias būtina patikslinti kiekvienu konkrečiu atveju.

Raktažodžiai: aviacijos sauga, aviacijos saugumas, teisinis turinys, holistinis požiūris