Safety, Security and Ethics

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1. Introduction

What are safety and security? Why should we value safety and security? These questions may sound redundant at first sight. Are safety and security not to be considered as elementary conditions for a minimally functioning human being? Exactly because of this apparent self-evidence, policy and law makers, as well as researchers of the legal dimensions or technical or economic aspects of safety and security might benefit from a more precise understanding of the concepts and the normative starting points behind them. This is especially so where specific measures or policies for ensuring or protecting safety and security must be balanced against other values or principles. In this chapter, the notions of security and safety will be clarified as normative concepts from a primarily ethical analytical perspective. In the next section, current discussions on the definitions and conceptual distinctions with regards to the notion of security and the related notion of safety will be discussed. In section 3, the focus will be on security and safety as values. In section 4, the possibility of moral conflicts between safety and security on the one hand and individual rights and interests on the other, will be discussed.

2. Definitions and distinctions

Although the notions of safety and security have received an occasional modest dose of attention during the last decades from the side of philosophers in some subdomains of applied ethics, such as technology ethics and medical ethics², they have been most intensively debated in philosophy of law³ and in a branch of practical philosophy, perhaps best referred to as normative political theory. So-called “realist” or “neo-realist” political theorists – from Thucydides, over Macchiavelli, Hobbes, Morgenthau to Waltz – start from the assumption that as individual human beings are fundamentally selfish and driven by a lust for power, only (voluntary) subjection to a sovereign state that is able to provide protection can offer security and safety for one individual from intrusions by others or for one state from others. In the controversies among realists themselves and in the debates between realists and their opponents, the notions of safety and security have therefore

¹ Special thanks are due to Margaret Warthon, research intern at the KU Leuven Centre for IT and IP Law 2018-19, for her support with bibliographical research.

² Of course, security and safety play important substantial normative roles in the development of technologies and in the regulatory field of standardization. The claim here merely concerns conceptual analysis.

³ See also section 3.1 in the chapter by Plixavra Vogiatzoglou and Stephano Fantin in this volume.

been articulated primarily on deep theoretical levels as global value-laden characteristics of individuals and of societies or states overall.⁴ As a consequence, there exists an understandable tendency of philosophers when reflecting on the concepts of safety and security to treat these first and foremost as global concepts, indicating the overall security or safety of either individuals or societies or states. Walt defines the notion of security as such a global dimension when he claims that security is the “preservation of the state territorial integrity and the physical safety of its inhabitants,” meaning that a state is secure when it is able to defend itself from hostile attacks and prevent other states from compelling it to adjust its behavior in significant ways or to sacrifice important political values.⁵ Focusing on the differences between security and safety, Riggerink contends that safety is the individual state of freedom from threats while security is the collective state of freedom from threats.⁶

Over the last decades, the theoretical debate on security and safety has incrementally expanded in scope and is slowly seeping into other fields than political philosophy. Boholm *et al.*, Ceccorulli and Lucarelli, Balzacq *et al.* have contributed to the debate with intricate linguistic and semantic analyses on the notions in general.⁷ Especially in connection with technology, the interest in the conceptual aspects of the two notions and their differences in respect of one another has grown. A clear and consistent line with regards to the definitions and the differentiation of security, on the one hand, and safety, on the other, cannot be discerned in recent scholarly literature. It is, however, important to note from the outset that underlying many different explanations of the differences between the terms of security and safety is a tacit distinction. This distinction is one between:

- security as unimpaired integrity of an entity itself, e.g., of a technical device, communication, a society, or a state, et cetera, from external risks and dangers, and
- safety as the absence of harmfulness or possible adverseness of such an entity to persons, their health, or economic or environmental situation.

In line with this implicit definition and distinction are for example Maurice who defines security as the status of being protected from harm caused by intentional human actions or behaviours, and safety as the state of being protected from harm caused by accidental technical failure or human

⁴ Compare L Freedman, ‘The concept of security’ *Encyclopedia of Government and Politics* (Routledge, 2003)

⁵ SM Walt, ‘Realism and Security’ *Oxford Research Encyclopedia of International Studies* (2010) DOI: 10.1093/acrefore/9780190846626.013.286

⁶ AS Riggerink, ‘Does Security Imply Safety? On The (Lack of) Correlation Between Different Aspects of Security’ (2015) 39 [4] *Stability: International Journal of Security & Development* 1

⁷ M Boholm, N Möller, S Ove Hansson ‘The Concepts of Risk, Safety, and Security: Applications in Everyday Language’ (2016) 36 [2] *Risk Analysis* 320 doi 10.1111/risa.12464; M Ceccorulli and S Lucarelli, *Security governance: making the concept fit for the analysis of a multipolar, global and regionalized world*. (EUI RSCAS; 2014/41; Global Governance Programme-98; European, Transnational and Global Governance, 2014); T Balzacq, S Léonard, J Ruzicka, ‘“Securitization” revisited: theory and cases’ (2016) 30 [4] *International Relations* 494 doi 10.1177/0047117815596590

mistake,⁸ and Heinz Peter Berg who contends that the safety of critical infrastructures such as nuclear infrastructures implies the protection of workers, the population and the environment against harm caused by accidents or radiological incidents.⁹ Sametinger *et al.* also remain within this same line of thought with regards to the medical sector when they claim that safety “is about the protection of a device's environment, i.e., mainly the patient, from the device itself”. According to them, a manufacturer will make sure that the device does not harm the patient, e.g., by not using toxic substances in implants or by careful development of an insulin pump's software. They also contend that security “is about the protection of the device from its environment, i.e., just the opposite to safety”.¹⁰

Further distinctions come in broad varieties and seem to be inspired by particularities of the types of situations or technologies that form the main subject of consideration of the authors involved. In relation to safety, risk is sometimes considered to be the eventual occurrence of unintentional events, while in security contexts risks are deemed to involve intentional malicious events. Amundrud and Flage define safety and security both as being without unacceptable risk and as antonyms of risk.¹¹

Nicklas *et al.* argue that safety and security as key concepts in the protection of critical infrastructure have a common goal, i.e., the protection of individuals, society and the environment. The authors, however, further argue that security is often defined as a state of protection against deliberate threat, while safety should be considered as being unaffected by hazards: "Safety functions are designed to protect users from hazards, e.g. an accident. Security functions protect the system and its contents against attacks like an intentional misuse." In mixed cyber- and physical systems these functions often conflict, according to the authors, since "for reasons of safety, redundancies are designed to ensure safety in dangerous situations. Simultaneously these redundancies should not be implemented for reasons of security, because they result in additional attack vectors. Consequently,

⁸ P Maurice, 'Safety and safety promotion: definitions for operational developments' (2001) 8 [4] Injury Control and Safety Promotion, 238

⁹ H-P Berg, 'Safety and Security of Critical Infrastructures with regard to nuclear facilities' in I Žutautaitė, M Eid, K Simola, V Kopustinskias (eds) *Critical Infrastructures: Enhancing Preparedness & Resilience for the Security of Citizens and Services Supply Continuity. Proceedings of the 52nd ESReDA Seminar*. Lithuanian Energy Institute & Vytautas Magnus University, 2017
<https://www.researchgate.net/profile/Mohamed_Eid19/publication/321027342_EUR_28803_EN_proceedings_52nd_esreda_seminar/links/5a097329aca272ed27a020f3/EUR-28803-EN-proceedings-52nd-esreda-seminar.pdf#page=64> accessed on 10 June 2019

¹⁰ J Sametinger, J Rozenblit, R Lysecky, P Ott, 'Security Challenges for Medical Devices' (*Communications of the ACM*, April 2015, Vol. 58 No. 4, 74) <<https://www.se.jku.at/wp-content/uploads/2015/03/TR-SE-15.03.pdf>> accessed 10 June 2019

¹¹ Ø Amundrud, T Aven, R Flage 'How the definition of security risk can be made compatible with safety definitions' (2017) 3, Proceedings of the Institution of Mechanical Engineers, Part O: Journal of Risk and Reliability 286 doi 10.1177/1748006X17699145

safety and security functions affect each other."¹² In the same vein, Nigam, Pretschner and Ruess stipulate that while safety is associated with “controlling catastrophic events caused by system malfunctions”, security deals with “mitigating attacks by malicious agents to the system”.¹³ Serpanos and Wolf claim that the concepts of security and safety have traditionally been developed separately and in different domains. They think, however, that the evolution of integrated cyber-physical systems and the Internet of Things require both terms to be treated jointly, or rather in a “unified” manner.¹⁴

To sum up, the notions of security and safety traditionally play key roles in normative political theory, where they refer to individuals’ or societies’ overall dimensions of being unimpaired by the selfishness and power-lust of other individuals or other states. Concerning the distinction between safety and security, recent scholarly contributions have been far from unanimous. Underlying many explanations seems to be a tacit assumption, however, that safety is primarily concerned with the adverse effects which any entity might have on the integrity of human individuals or its environment in general, while security primarily is a dimension of integrity of the entity as such. With the introduction of the Internet of Things, where cyber- and physical environments are merging, e.g., in connected medical devices, in aviation, or in connected and automated vehicles, the notions of security and safety come to be used more and more interchangeably or exactly in order to refer to different aspects of one and the same dimension, as security flaws may more often than not be the flip-side of safety risks and vice versa.

3. Security and safety as values in ethics and normative political theory

Notwithstanding their centuries-old elementary roles in philosophy of law and political theory, substantial analyses and positive ethical arguments in favor of the protection of the values of security and safety are rather scarce. Security and safety can not only – like all normative notions – be characterized as essentially contested concepts, meaning that the search will always have to be for the *for the time being* most adequate definition and not for the conclusively most adequate one¹⁵; they also are on a more practical, concrete level, relatively under-exposed concepts in ethics and normative political theory as topics in their own right. They often figure as the counterpart of values or normative starting points centered around the individual, such as autonomy, privacy, and data protection in debates on value conflicts between individualist and collectivist value notions, e.g. privacy versus public security. Whereas in these debates, however, a lot of attention is paid to the conflicting values and rights, security and safety as such receive relatively little attention as independent values. Nonetheless these discussions can give us indirectly some insights in the ways in which safety and security function as values (see section 3 of this chapter). Before focusing on

¹² M Nicklas, P Mamrot, D Winzer, S Lichte, S Marchlewitz, K Wolf, ‘Use case based approach for an integrated consideration of safety and security aspects for smart home applications’ (2016 11th System of Systems Engineering Conference (SoSE) Kongsberg, 2016) doi: 10.1109 / SYSOSE.2016.7542908

¹³ V Nigam, A Pretschner, H Ruess, ‘Model-Based Safety and Security Engineering’ (2019) ArXiv 15 <<https://arxiv.org/pdf/1810.04866.pdf>> accessed 10 June 2019

¹⁴ D Serpanos and M Wolf, *Internet-of-Things (IoT) Systems - Architectures, Algorithms, Methodologies*, (Springer, 2018)

¹⁵ WB Gallie, ‘Essentially Contested Concepts’ (1956) 56 Proceedings of the Aristotelian Society, 167

that type of debates, however, it is important, first, to consider security and safety under their dimensions of public goods and common goods, and, second, to delve a little deeper into the typical valuable aspects of security and safety.

The notions of security and safety are often referred to as *public goods*, because the benefits of a safety or security protection measure to one person often cannot be completely individuated from those to another, while the burdens and benefits of safety and security measures affect different individuals and sub-groups of a population often in different manners. In economic theory, a public good is often defined as a type of good that members of a community would not possess if they were each motivated only by their own self-interest. The problem posed by a public good in economic theory is that the optimal course of action for each individual, from the vantage point of egoistic rationality, is not to contribute to the provision of the good, even though everyone would be better off if they all would do so.¹⁶ The notion of a *common good* refers to the interests that members have in common or to the facilities that serve common interests. Relevant facilities and interests together constitute the common good and generally serve as a more or less shared perspective for political deliberation, as Hussain puts it.¹⁷ In both academic and non-academic discussions, people often refer to the common good as if it were a public good in the economic sense of those words. Although sophisticated distinctions can be made between the two notions,¹⁸ the subject will not be dwelled on too extensively. What is important to keep in mind, is that the common good or a public good may be a benefit for society as a whole but not a net benefit to all individual members of society alike or in the same manner and that it may moreover conflict with individual rights and interests.

Safety and security, taken here for the time being as being protected from hazards and attacks, may be considered both public goods and substantial constituents of the common good. Both characterizations remind us (1) that safety and security measures may be important beneficial assets to society, while each individual member of that society might overall be better-off with a situation in which all of the other members of society contribute to it except for him- or herself, and (2) that individuals may have to contribute to the safety and security measures that are a benefit to society as a whole, whereas they themselves are not sharing in that benefit (to the same degree as others), or, even worse, have their interests or rights harmed or infringed by it. This raises not only complicated, deeply fundamental ethical questions concerning the moral conflicts involved that may ultimately hinge on the opposition between collectivist and individualist ethical outlooks, such as communitarian or utilitarian versus deontological approaches. It also gives rise to challenges concerning distributive justice: who exactly benefits from particular forms or instantiations of safety and security protection? Whose security and safety are we concerned with, and which sacrifices are acceptable to ask of individuals or societal groups in order to achieve them? These issues will be discussed in the next section.

¹⁶ M Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups*, (revised edition, Harvard University Press, 1971)

¹⁷ W Hussain, 'The Common Good' *The Stanford Encyclopedia of Philosophy* (Spring edn 2018) <<https://plato.stanford.edu/archives/spr2018/entries/common-good/>> accessed 10 June 2019

¹⁸ See previous footnote.

Why are security and safety worth protecting or promoting? Which aspects of security and safety make these values so important? As was mentioned at the beginning of this chapter, raising this question sounds somehow superfluous. Although philosophers have the reputation of leaving nothing unquestioned, the exact reasons behind security and safety as values have not received much philosophical attention, except for general acclaim of their conditionality for many other values. Although for the ethical justification of security and safety protection measures and policies doubtlessly many intricate utilitarian arguments can be delivered, reflection on security and safety as values probably best starts with the works of a group of ethical theorists, often referred to as “need-consequentialists” such as Thomson, Wiggins and Braybrooke. Not only are their theories intuitively very appealing; as will become clear from references to recent work on security and safety in the course of this section, most of the views put forward in the recent and current debates on safety and security seem to come very close to the fundamental contentions of need-consequentialism. Need-consequentialists represent so-called objectivist value theories, which define or stipulate the good without taking the desires, preferences or personal conceptions of the good of individuals as their starting point. They claim that morality has an objective basis in reality in the form of basic, functional and social needs of human beings. This objectivism is often contrasted with the value subjectivism of for instance utilitarianism – also a branch of consequentialism, but one in which the central notion of utility is ultimately based on individual preferences. The claim for objectivity of need-consequentialism is sometimes criticized for denying or at least not taking into account the fact that needs do not speak for themselves but are always interpreted by human beings.¹⁹ And indeed, one of the strong points of need consequentialism seems to be exactly the fact that they start from the quasi self-evidence of the normativity of needs. On the basis of this quasi self-evidence, need-consequentialists will – probably rightfully so – doubt the rational capacities of people who would claim that the moral desirability of feeding a hungry baby or sheltering it and protecting it from the cold or from fierce sunshine cannot be positively argued for. Since the objectivism-versus-subjectivism debate is not our primary concern here, we will leave that issue aside. It is worth noting however that the very few participants in the debate on possible conflicts between security, safety and individualist values such as autonomy and privacy, who try to provide the values of security and safety with some context, mostly tend to refer to utilitarianism as their natural habitat.²⁰ They thereby seem to overlook the aspect of (apparent) self-evidence of the value notions which is much closer to the objectivism inherent to need-consequentialism, than to the subjectivism of utilitarianism.

The issue of self-evidence is a very relevant one for the purposes of this chapter. Need-consequentialists generally claim that human well-being minimally consists of the satisfaction of certain basic needs. A stereotypical conception of basic needs refers to biology and defines good in terms of sustainment of life and the possession and integrity of bodies, bodily parts, etc. Normally, as was already suggested, proponents of this view are of the opinion that the duty to satisfy these needs does not call for further justification. Other things or states of affairs are considered to be goods insofar as they contribute to the satisfaction of basic needs. This kind of value theory

¹⁹ B Barry *Political Argument* (Routledge and Kegan Paul 1965) 47-49

²⁰ So for instance M Hildebrandt, ‘Balance or Trade-off? Online Security Technologies and Fundamental Rights’ (2013) 26 [4] *Philosophy and Technology* 357-379

automatically entails an urgency thesis: the more an asset or commodity contributes to satisfying basic needs, the more urgent it is for persons having the needs.²¹ Because in modern welfare societies there is of course an abundance of all kinds of alternative means to provide, obtain or remain in possession of the things which according to this criterion are considered to be elementary goods, objectivist theorists of this kind often supply further criteria which see to the satisfaction of needs to be met in order to live by and large the kind of life which is actually lived by the average citizen of the society at stake. Basic needs then become a function of the general living standards of the community involved, yielding norms like 'subsistence level', 'decent standard of living' etc.²² Sometimes, in addition to these, extra criteria are stated that must be satisfied in order to fulfil functions or tasks, defined within and through social constellations, such as those of parents, heads of families, workers, citizens etc. , as well as criteria concerning the level of satisfaction of such basic, social and functional needs.²³

Clearly, advocacy of protective measures regarding security and safety can build on objectivist need-consequentialist considerations of the latter kind. Security and safety policies and arrangements in our societies, e.g. military, police, medical and other services, see directly or indirectly to the satisfaction of basic needs, social needs or functional needs. Some protect life, health and shelter; some protect our institutions, our educational system, our economy, our democracy, in short: the better part of our way of life. Many of the relevant policies and arrangements aim to satisfy in part basic biological needs and in part social or functional needs, simultaneously. Military services may protect people from being killed; but they may also protect democratic institutions and a certain level of welfare. Cyber security measures protecting critical infrastructures for the provision of energy against attacks by hackers, may help to protect people from life threatening cold, but also enable them to live their lives comfortably according to the relevant standards in their societies.

This also explains why Nyman argues that the 'positive' or 'negative' postures given to the term security are confusing. While in the analytical and normative frame of security in its negative form, security is defined as the absence of threat and avoidance of something "bad", a positive version would be put in terms of conditions for human well-being.²⁴ Jeremy Waldron argues that national security in particular protects not the mere survival but a way of life that is shared by many in society. Waldron understands this way of life as a "common reservoir of values" which includes the protection of certain individual rights and liberties for "meaningful exercise".²⁵ When discussing

²¹ G Thomson, *Needs*. (Routledge and Kegan Paul, 1988) 77-89, 98-107, 121-122, 125-128; D Wiggins, *Needs, values, truth. Essays in the philosophy of value*. (Aristotelian Society series vol. 6, Blackwell, 1987) 48-49, 60-67, 117-121

²² SI Benn and RS Peters, *Social principles and the democratic state*. (Allen and Unwin 1975) 142-147

²³ D Braybrooke, *Meeting Needs* (Princeton University Press 1987) 48-49, 60-67, 117-121).

²⁴ J Nyman, 'What is the value of security? Contextualising the negative/positive debate' (2016) 432 [5] *Review of International Studies* 821

²⁵ J Waldron, 'Safety and Security' (2006) 85 [2] *Nebraska Law Review* 453, 506

conflicts between security and safety on the one hand and individual rights on the other, this view will be returned to.

The protection of ways of life is a relevant important ingredient for the justification of security and safety measures in many sectors, such as the security of energy supplies, hospital systems, and migration control, among many others. National security policies gradually focus more on networks and computer systems than on national territory. We depend on networks and computer infrastructures of critical infrastructures for the exercise of freedoms through which we form our ways of life and perform our “normal” daily activities.²⁶ This is why energy, transport and information systems are considered essential or critical services. If these systems are attacked, our standard ways of living are interfered with, possibly causing dramatic physical, psychological, or financial damage and considerable harm to the institutions substantiating democracy and the rule of law).²⁷

4. Security and safety in conflict

In the aftermath of the dramatic terrorist attacks at the beginning of this millennium, a debate flared up involving ethicists, political philosophers, legal scholars, and law and policy makers, on conflicts between public security and safety on the one hand and individual rights and liberties, such as the right to privacy and the right to data protection, on the other. Of course, the subject of the debate is a subspecies of the more generic issue of conflicts between the realization of public interests and the protection of the interests and rights of individuals and minorities. In most of these conflicts we are confronted with intangibles on both sides. Public interests to be realized may represent the most attractive perspectives, but still have to be realized, while the measures taken to realize the objective must yet prove their efficacy. Simultaneously, at the other horn of the dilemma, the infringements of a right, e.g. the right to privacy, can be serious and significant, but nonetheless its impact can often be specified only with great difficulties.

As was suggested earlier on, security and safety on the one hand and liberties on the other are generally conceived of as very different types of values or even as incompatible concepts, due to the fact that they fit better with different moral outlooks: safety and security seem to be more related to outlooks that warm to collectivity, e.g., communitarianism, utilitarianism and need-consequentialism, whereas rights of the individual are closer to outlooks in which the individual is key, such as in deontological, Kantian theories. The problem of these moral outlooks is that they may be overlapping and reconcilable to a large degree, but not completely. In the end, they rest on irreconcilable normative views of the relationship between individuals and minorities on the one hand, and majorities and society as a whole, on the other. Many of us nowadays are – mostly unwittingly – ethical eclectics reasoning now with deontological premises, then with utilitarian ones, and then again with communitarian ones. Thanks to the overlap between them, this often does not

²⁶ M Bourne, *Understanding Security*. (Macmillan International Higher Education 2013) 88

²⁷C Aradau, ‘Security that matters. Critical infrastructure and objects of protection’ (2010) 41 [5] *Security Dialogue*, 491; M Cavelti and K Sjøby Kristensen, *Securing the homeland: critical infrastructure, risk and (in)security* (Routledge, 2008) 1

lead us into irresolvable dilemmas. Problems occur exactly where we are confronted with bifurcations of individual-regarding considerations and collectivity-regarding ones. To the degree that the conflicting views are really substantially irreconcilable, not much more can be done than take a somewhat agnostic, pragmatic approach by respecting both horns of the dilemma and by asking: Can the security or safety objective be achieved by means that impact the right or liberty involved less significantly than the one proposed? And: Can the security or safety objective be achieved at all or at least to large degree by the measures proposed? By answering the less impacting alternatives and efficacy questions a decision can be reached that of course does not resolve the ethical dilemma, but nonetheless seems to be the best achievable reasonable way of coming to terms with the fundamental inconsistencies of the late modern or post-modern moral mind.

With regards to the conflict between security, safety and individual liberties, Hildebrandt (2013) claims that requests for giving up some of our liberty to achieve security have a rhetorical ring fitting “the political agenda” because of the utilitarian considerations that she believes to be behind the security objective. Interestingly, Faden and Shebaya discuss the typically prospective nature of security measures and policies and, consequently, the uncertainties concerning their efficiency and efficacy. They consider this to be an important obstacle for policy and law makers who want to account for their (proposed) security policies and laws.²⁸ Be this, as it may be, Jeremy Waldron seems to offer a much more promising approach by not focusing on rhetorics and not restricting himself to the minimalist approach of applying less impacting alternatives and efficacy questions.²⁹ Waldron suggests that we go some steps further than just concluding that there are simply some basic irreconcilabilities at work in the *prima facie* conflicts. He argues that security and liberties should not be treated as completely incommensurable values. Fundamental liberties require security for their meaningful exercise; but also protecting our way of life does not make much sense if our liberties are treated as insignificant.³⁰ Moreover, touching on the issue of the distribution of benefits and burdens of security and safety protection policies and measures, Waldron claims that important values should not be maximized without paying any attention to their distribution. The balance between *prima facie* conflicting values should be “governed and constrained by egalitarian principles”.³¹ Extensive critical assessment of Waldron’s claims would go far beyond the purposes of this chapter. His ideas about the practical connections between security, safety and individual liberties and rights – and we might want to add: the institutions typical of the democratic state and the state governed by the rule of law – *via* the notion of ways of life, however, seem to offer at least a promising way out of the dilemma as it does more justice to the intricate connections between security, safety and liberties and fundamental rights than the minimalist approach discussed in the previous paragraph. Whether this approach in the end can do completely without the auxiliary questions of less impacting alternatives and efficacy, however, remains to be seen.

²⁸ R Faden and S Shebaya, ‘Public Health Ethics’ in *The Stanford Encyclopedia of Philosophy* (Winter edn, 2016) <<https://plato.stanford.edu/archives/win2016/entries/publichealth-ethics/>> accessed 10 June 2019

²⁹ J Waldron, ‘Safety and Security’ (2006) 85 [2] *Nebraska Law Review* 453

³⁰ J Waldron, ‘Safety and Security’ (2006) 85 [2] *Nebraska Law Review* 453, 506

³¹ J Waldron, ‘Safety and Security’ (2006) 85 [2] *Nebraska Law Review* 453, 479

5. Conclusion

By and large, many recent authors on safety and security seem to agree – albeit often tacitly – that safety is primarily concerned with the adverse effects which any entity might have on (the integrity of) human individuals, while security primarily is a dimension, i.e., the unimpairedness, of the integrity of the entity as such. Many authors, furthermore, distinguish, albeit in different manners, between safety as controlling catastrophic events caused by system malfunctions versus security as dealing with mitigating attacks by malicious agents. With the blending of the physical and virtual world through the Internet of Things, the notions of security and safety come to be used more and more interchangeably, as security flaws often turn out to be the flip-side of safety risks and vice versa.

Articulations and justifications of security and safety as value notions can build on objectivist need-consequentialist considerations. Security and safety policies and arrangements in our societies provide directly or indirectly for the satisfaction of basic, social, and functional needs. Some protect life, health and shelter; some protect our institutions, our educational systems, our economy, our democracy, some protect the facilities that make our lives comfortable, extra enjoyable. Many security and safety policies and arrangements happen to satisfy in part basic biological needs and in part social or functional needs, simultaneously.

The benefits and burdens of policies and other arrangements for the protection of security and safety are not automatically distributed equally, in the sense that the people who gain from them share the burdens equally, while people who do not gain, do not share the burdens. This raises questions of distributive justice in terms of fairness, equity etc. The issues of distributive justice can, but do not necessarily always, overlap with the delicate fundamental issues of moral conflict. The latter occur in situations in which the realization of a (proposed) policy or measure of security or safety protection collides with liberties or rights of individuals or specific groups. To the degree that the conflicting views derive from differences of moral outlook and therefore are really substantially irreconcilable, not much more can be done than to take a somewhat agnostic approach by respecting both horns of the dilemma and applying the questions of less impacting alternatives and efficacy in order to see whether it practically makes sense to tolerate infringements of rights and liberties for the sake of the interest at issue. It should be noted, however, that the latter approach is a pragmatic one. Its persuasiveness seems to hinge more on some idea of reasonableness than on substantial morality. If one would prefer to have a more substantial moral approach, one should try somehow to overcome the fundamental conflict or incommensurability between the moral outlooks involved. It is not clear whether such an undertaking can ever succeed. Waldron's approach in terms of the connection between rights and liberties and the protection of ways of life, however, seems to offer promising first steps in the exploration of a rationally satisfying moral justification.

At the end of this chapter, it may be good to make some comments on the role of ethics in the context of policy and law making especially with regards to the development of technologies involved in safety and security policies and arrangements. Elsewhere, an extensive argument was given for the role of ethics and law as important preconditions for the acceptance of technology

regulation and for the adoption of the technologies themselves.³² The reasoning behind this argument is relatively simple: by including ethical and legal considerations in the development of the technology or in accompanying regulatory schemes, the makers avoid adverse effects for users and in that way facilitate the uptake. For this reason, ethics, with the law in its wake, may also be viewed as an asset for the security and safety technology business.³³ Reducing it to an instrument for marketing strategy, however, will in the end not work. Recently, various authors have warned for the risk that in the context of (security) technology development, ethics may be reduced to an uncritical instrument of mere formality.³⁴ Indeed, such an approach is to be avoided if only because it may soon turn out to have counterproductive effects. The ideal situation is of course one in which engineers, policy and law makers, stakeholders and scholars from ethics and law make a sincere joint effort to work together on the realization of responsible safety and security arrangements.

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