

THE CONNECTED CAR AND DATA PROTECTION: A DILEMMA OF LEGAL ETHICS

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Abstract: *The paper discusses the connected car that by causing serious threats to data protection, constructs a serious dilemma of legal ethics. The author starts with the necessary conceptual work and then tackles the problem of rational justification of moral dilemmas. Moral dilemmas are taken as moral problems that are difficult because they should be solved by a rationally justified solution, although all alternatives for the solution are entangled, i.e. whenever an alternative delivers a building bloc necessary for rational justification it simultaneously threatens or takes away another one. The reason for this is found in a great many of incommensurate factors, i.e. factors that prevent comparison between moral factors, e.g. moral parameters, moral technologies, perspectives etc. Nevertheless, workaround solutions are often possible and the author concludes by suggesting such a solution for the moral dilemma constructed by the connected car.*

1. Introduction

The concept of the connected car roots in the idea that cars should be online whenever they are utilized on public roads, so that they can always exchange data with other cars and the Internet. The obvious advances lie in an increase of traffic security and improvements in traffic planning. Because, if location and impulse (i.e. mechanical direction) of a sufficiently large number of traffic participants are known, accident risks can be calculated and lives be saved. Therefore it seems quite trivial that it is morally right to allow the realization of such technology. However, the necessary data aggregation means that there is a high risk of abuse causing severe threats to public freedom. To minimize this it seems to be morally right to forbid such dangerous technology. Thus, there is a dilemma of legal ethics.

Dominantly we try to solve moral dilemmas with non-quantitative and/or highly cognitive methods of philosophy¹ and theology. Nevertheless, at least to the author's knowledge, a convincing systematization of moral dilemmas is still missing.² For this reason, she will present a first draft of such a systematization of moral dilemmas, worked out during the last years, and discuss the problem of the connected car versus data protection within this framework. So, the goal is only to propose such a systematization, but not that the systematization provides solutions of dilemmas easily. This would be much to much.

¹ The author regards her text as part of Analytic Philosophy, except that she avoids formulas whenever possible in favor of natural language. Inevitable, some terms like «difficult», «solution» etc. are used in multiple meanings. Whenever the meaning can be understood from the context the author abstains from using indices for the sake of better readability.

² In his contribution to the Stanford Encyclopedia of Philosophy on Moral Dilemmas (cf. McCONNELL, TERRANCE, Moral Dilemmas. In: Zalta, Edward N. [ed.], The Stanford Encyclopedia of Philosophy [Fall 2014 Edition], Item 7 [Types of Moral dilemmas], URL = <https://plato.stanford.edu/archives/fall2014/entries/moral-dilemmas/> [all websites last accessed on 7 January 2018]) McConnell presents some classical approaches to such a systematization. Although meritorious this does not reach the core of moral dilemmas.

The paper will start with a solid definition of the concept «dilemma», then discuss the core idea of the moral dilemmas, the concept of dilemma solution, the functional mechanisms of moral dilemmas and finally present a systematization of the dilemmatic factors, i.e. the factors that build up the dilemmatic problem.

2. Moral Dilemmas

«On the high seas there is a lifeboat with 20 people. The boat can carry only 10 people at most and therefore it will shortly sink due to overloading, unless you throw 10 people into the sea. It is given for certain that there are no other alternatives and that being within the boat means survival but being outside means death, no matter whether you were thrown into the water or you go under with the boat. Please decide what is morally right in this situation and justify your decision by rational reasons.»

Moral dilemmas like this short text are frequently used in ethics.³ Before we tackle the (really interesting) philosophical dimension, we will very briefly discuss moral dilemmas as a genre of literary text.⁴

2.1. The moral dilemma in the sense of literary science

From a literary point of view and understood as a literary genre⁵ moral dilemmas can be roughly taken as narrative texts of the type of «(short) short stories»⁶ about moral dilemmas in the sense of philosophy. Usually they end with the direct request to the reader to give a rationally justified moral judgment – sometimes even to propose some (fictive) intervention. Despite this the moral dilemma has similarities with parable and murder ballad because of its focus on morality, but it also resembles the anecdote, at least partly. The plot usually takes place only in one single, often fictive place. A neutral narrator usually not appearing as such tells a fictional, usually dramatically escalating plot (in the sense of a course of tempo-spatially fixed events involving intelligent agents) that typically involves existential questions. The (fictive) protagonists are usually characterized only very sketchily and bear no names or names of little significance. The reader often knows more than the protagonists, e.g. about the inner world of other protagonists, their background or the further course of events, e.g. we know that under some circumstances a lifeboat will *certainly* go under. Very often, the antagonist is not a person but the constellation of the dramatic circumstances.

The dramatic structure of the moral dilemma is characteristic: The exposition is kept brief and flows smoothly into the plot. The perspective typically changes before the climax the, in so far as the plot breaks off and the reader is directly addressed and requested to give a moral judgment (or perhaps even a fictive intervention), she has to justify rationally. Unlike the parable or the murder ballad, neither the end of the plot nor the moral judgment (including all necessary theoretical assumptions) is fixed from the outset. The judgment request to the reader actually replaces the climax and at the same time works as a retarding moment. This also means, that the reader herself must produce the climax, so to speak. The degree of involvement of the reader can therefore be quite considerable, and as academic exercises, moral dilemmas are usually quite popular among students – at least according to the author's experience.

³ The existence of dilemmas is actually a highly controversial issue in ethics, but since we will not discuss on this we will a priori and corrigibly accept the possibility of their existence here.

⁴ Moral dilemmas play a big role in African literature. For some examples cf. <https://www.britannica.com/art/dilemma-tale>.

⁵ Whether moral dilemmas should be understood as literature at all is undoubtedly controversial, but we will not discuss on this any further.

⁶ For some examples cf. <https://americanliterature.com/short-short-stories>.

2.2. The Moral Dilemma in the Sense of Philosophy

Viewed from the perspective of philosophy, the moral dilemma⁷ can roughly be understood as a special kind of dilemma in general. *A dilemma is a difficult entanglement problem and a moral dilemma is a difficult moral entanglement problem.*

Therefore, genus proximum is the dilemma in general and indeed one knows myriads of non-moral dilemmas, such as Buridian's ass, dilemmatic paradoxes (such as the sorites paradox, the ship of theseus, the paradox of the court, etc.) or the classic double bind. Differentia specifica is the moral moment. Further, moral dilemmas become dilemmas of legal ethics through additionally incorporating relevant legal aspects. To discuss all this the most important basic concepts have to be clarified:

- «*Problem*»: A problem is a relevant deviation of a desired state from an actual state whereby given the boundary conditions (esp. actors, rating scale, relevance and dominance conditions) the desired state is rated more valuable than the actual state. Often this involves the task of solving the problem, i.e. the requirement to adapt or at least approximate the actual state to the desired state.
- «*Morality*»: morality⁸ is a normative and/or evaluative system of human nature and culture, which as far as we know is a human universal and has the following characteristics: (1) it is dominated by the question of the distribution of suffering and happiness among humans; (2) there is a dominant, emotionally sensitive and morally constitutive (but also cognitively understandable) core area⁹, where morally relevant actions trigger specific emotional reactions such as sentiment, indignation etc., but these reactions can also be scientifically explained; (3) there are moral entities that can be added contingently by association, like the great moral artifacts of humanity, such as the «morally correct treatment of gods» governed by the moral systems of world religions.¹⁰
- «*Difficult*»: Is meant in an empirical sense here and related to problems. Thus a problem is understood to be difficult if it is found to be difficult by the typical expert in the field.
- «*Entanglement*»: Given is a combination of factors and some of these factors are necessary. Now if an alternative (e.g. an action) that produces such a necessary factor or at least makes its existence likely but simultaneously takes another necessary factor away or at least makes it unlikely, this is what we call entanglement here. For example, if the task is to build a house with four statically necessary cornerstones, each entangled alternative would simultaneously provide a cornerstone and take away at least one other. A problem becomes a dilemma if and only if all alternatives are entangled in this sense.
- «*Problem solution*»: This will be discussed in more detail in one of the next sections.

3. Technical Definition of the Moral Dilemma

3.1. Definition

On the basis of what has already been said, we can now propose the following technical definition:

A moral dilemma in the sense of philosophy = df. a difficult moral problem that requires at least two necessary factors to solve, but all alternatives are entangled. This means that if any alternative produces one necessary factor or at least makes it more likely, it simultaneously destroys another necessary factor or at least makes it more unlikely. Thus, it makes the whole moral problem difficult (=weak dilemma) or completely unsolvable

⁷ When we use the term «moral dilemma» without any extension in this text we mean it in the philosophical sense. For an introduction cf. RATERS, MARIE-LUISE, *Das moralische Dilemma: Anatomie der praktischen Vernunft*, Karl Alber, Freiburg et al. 2013; FOOT, PHILIPPA, *Moral Dilemmas and other Topics in Moral Philosophy*, Clarendon Press, Oxford 2002; and GOWANS, CHRISTOPHER W. (ed.), *Moral Dilemmas*, Oxford University Press, New York et al. 1987.

⁸ We use the standard definition of the author.

⁹ So, in the constituent core area one does not know what morality is, but one *feels* it.

¹⁰ Obviously, there are areas of moral that only count as such because people regard them as such.

(= strong dilemma). As a formal structure of a strong (!) dilemma, one might suggest: « $OA, A \rightarrow \Box B \wedge \Box C, D \vee E, D \rightarrow B \wedge \neg C, E \rightarrow C \wedge \neg B \vdash \neg A$ ».¹¹

3.2. Strong and Weak Dilemmas

In this context it is important to emphasize that this all means that we *do not require insolubility as a necessary property of dilemmas*. It is only necessary that solving the dilemma is difficult,¹² and as already mentioned above difficulty is considered an empirical property. This plays an important role in distinguishing between strong and weak dilemmas: strong dilemmas are unsolvable, weak dilemmas are only difficult.¹³ Although complete insolubility of dilemmas could possibly be proven by indirect proof, definite knowledge about it is actually unnecessary for most questions of practical ethics.

3.3. Ceteris Paribus Condition

Quite trivially, dilemmas are subject to a ceteris paribus condition, which means that by solving it we are bound by all explicitly stated or implicitly presupposed relevant conditions and the solution constraints. For example, in the lifeboat case mentioned above, one should not assume that the problem is being solved within the framework of an apocalyptic sect aimed at «taking people to paradise» by killing them. Nevertheless, this limitation is partly removed in the case of workaround solutions (see below).

4. Moral Dilemma Solving

As a process, the solution of a moral dilemma is a kind of problem solving and the typical task of the recipient. As a product, it is the result of this process.

4.1. Rationally Justified Solutions and the Functional Core of Moral Dilemmas

The solution of a dilemma is dominantly understood in the sense of a *rationally justified solution*, even if the core of the dilemma lies in a decision between what «the heart tells you or the brain», i.e. between emotion and cognition. Thus, the solution of a moral dilemma typically consists of these two parts: (1) Invention of a particular solution and (2) its rational justification. Crucial is the second part, the rational justification, which is true even though sometimes, as with Buridians's ass, the decision aspect is more visible.

It is precisely this need for rational justification that constitutes the functional core of the moral dilemma, for this rational justification becomes difficult or impossible as a result of the entanglement: In a rational justification, every single building block must be rationally justified. This precisely is the core problem of any dilemma, because owing to the entanglement any alternative simultaneously provides a rationally justified building block but at the same time threatens or takes away another one. So, if only such entangled alternatives are available, finally the complete rational justification becomes difficult or even impossible.

This can be demonstrated by our lifeboat case: However one saves people, every rescue operation is entangled with «sacrificing» other people. Although only being a moral problem initially, it ultimately turns out to be a problem of rational justification as well, because a «sacrifice» of human life must be rationally justified in any case.¹⁴ But, since any alternative contains such a part, it contains a building block, that is difficult or

¹¹ The symbols correspond to the usual logical and/or mathematical notation (cf. https://en.wikipedia.org/wiki/List_of_logic_symbols, https://en.wikipedia.org/wiki/Modal_logic and https://en.wikipedia.org/wiki/Deontic_logic. We obviously exclude questions of perspective in favor of easier readability and of course, deductive validity of this formula is not claimed here. Further, our formula shows, that we do not follow the classical form of dilemma. A quite common formula for the simple constructive dilemma reads: « $A \rightarrow C, B \rightarrow C, A \vee B \vdash C$ » and for the simple destructive dilemma « $A \rightarrow B, A \rightarrow C, \neg B \vee \neg C \vdash \neg A$ » (THIEL, CHRISTIAN, Dilemma, in: Mittelstrass, Jürgen (ed.), *Encyclopedie Philosophie und Wissenschaftstheorie*, Stuttgart, 1980, Vol. 1, p. 482).

¹² See above.

¹³ Depending on the context, we will use the term «difficult», as including insolubility or excluding it.

¹⁴ Today there are only a few accepted exceptions like self-defense, some forms of killing in war and abortion (if understood as a sacrifice of people).

impossible to rationally justify. In sum, this makes the entire rational justification of any solution difficult and – once again – this is exactly what constitutes a dilemma.

4.2. Solutions Ex-ante and Ex-post

Another important aspect of legal ethics is the distinction between ex-ante solutions and ex-post solutions. By an *ex-ante solution*, we understand pre-event regulations, similar to the codebooks of the continental European legal tradition. In legal ethics, this often is a legal task and only works with a certain degree of abstraction. This, in turn, requires principles, making it difficult for the following reasons: (1) On the one hand, the validity of the universalization principle resulting from the *theorem of identity* must be assumed, meaning that equal cases must be treated equally. For this reason, precedence can always be expected. (2) On the other hand, this forces a lawmaker to declare under what circumstances she is prepared to sacrifice the lives of state citizens. Politically, that's practically impossible. A solution may be morally optimal, yet the question arises whether a state may do such a thing at all. Although, any state maintaining an army, navy, fire brigade or police, is prepared to sacrifice state citizens in certain cases, it is virtually impossible for the postmodern state to admit this. So, in the sense of defensive regulations, states favor the *ex-post solution*: that means the assessment of the actions afterwards and in the context with legal ethics often means the question of the morally right punishment.

4.3. Solutions in the Proper Sense and Workaround Solutions

A *solution in the proper sense* is a solution in compliance with the *ceteris paribus condition* already mentioned. This does not apply to *workaround solutions*. Here, the *ceteris-paribus condition* may be violated in *principle*¹⁵: A workaround solution does not solve the original problem but another problem (linked with the original one), but the second solution is accepted as a sufficient solution of the original problem as well. A good example of this is the approximate calculation of the number π [«pi»] in rational numbers. Strictly speaking, the number π has never been calculated at all until now, because we only have an approximate value, i.e. actually another number. However, since this number is sufficiently similar to the number π for many tasks, this is virtually always regarded as sufficient for mathematics. The same is true of the famous problem of dividing 17 camels of a deceased father to his three sons, without dividing the animals.¹⁶ Many readers probably know this riddle from their childhood. Overall, the following types of solutions are apparent:

- Solution in the proper sense
- Workaround solutions: i.e. (1) approximation, (2) optimization, (3) analogy and (4) free solution substitution.

5. Functional Mechanisms and Systematization of Moral Dilemmas

So, in order to recap, let us repeat that we consider moral dilemmas as difficult moral problems that are difficult because they should be solved by a rationally justified solution, but all alternatives for the solution are entangled, which means that whenever an alternative produces a building bloc necessary for rational justification or at least makes it more likely, it simultaneously destroys another such factor or at least makes it more unlikely. Thus, in the end there is no rational justification. Now, we will explain how exactly the mechanisms of entanglement work, which we understand as a contribution to the systematization of the moral dilemmas. We can formulate the following four theorems:

1. There are no content restrictions for the production of entanglements
2. Dilemmas and dilemmatic factors can be freely combined

¹⁵ The exact details cannot be discussed here any further.

¹⁶ For instance cf. <https://mathoverflow.net/questions/271608/17-camels-trick>.

3. Entanglement is dominantly generated by four classes of structural factors (= structural perspective)
4. There are four classes of incommensurate factors (= content related perspective)

Ad (1): There are no content restrictions for the production of entanglements: This means that for constructing moral dilemmas basically everything is allowed, as long as it makes a moral decision difficult by entanglement (in the sense of the above definition). Thus, in particular everything involving incommensurate factors (see below) may be just fine.

Ad (2) Dilemmas and dilemmatic factors can be freely combined: Simple dilemmas and/or dilemmatic factors can be combined into dilemmatic combinations (=molecular or combined dilemmas). A special form of a combined dilemma is the *meta-dilemma*, which can be derived from virtually any dilemma. By this we mean that the fact, that a person has to solve a dilemma, may itself be a dilemma (for example when it comes to a solution that she does not dare to say in public).

Ad (3) Entanglement is dominantly generated by four classes of structural incommensurate factors (=structural perspective): Responsible for the entanglements and so finally for the difficulties with rationally justified solutions for moral dilemmas are *incommensurate factors*. This means that two or more phenomena cannot or can hardly be compared with each other, for example because no common scale exists (e.g. it is impossible to compare line and plane or plane and space etc. in Euclidian geometry¹⁷ or space and time, quality and quantity etc.).

If a person attempts to rationally justify a judgment, she can be limited by entanglement arising out of such incommensurate factors. Thus, the concrete chain of justification becomes irrational and if this holds for all alternatives, there is no single rationally justified alternative that makes all rational justification difficult or impossible. Here, we distinguish between *complete and normal incommensurability*: *Complete incommensurability* means that two phenomena are completely incomparable, *normal incommensurability* means that this is only very difficult. We call it «normal» because on many occasions incommensurability is not as simple and strict as examples from Euclidian geometry may suggest. Very often it is just unknown in how much some phenomena are commensurable or not. In addition, we distinguish between *intrinsic and derivative incommensurability*. *Intrinsic incommensurability* means mere incommensurability without any more meaning. *Derivative commensurability* is based on other factors.

Phases and transitional phases: For our systematization we use a trivialized form of terms from thermodynamics, where one distinguishes between spatial-temporal sections of relative stability, called *phases*, and intermediate or transitional stages between them, called *transitional phases*. We don't claim that this holds for all phenomena, for there are phenomena completely consisting of transitional phases because the transition is so gradual that the distinction between phases and transitional phases is impossible. But, we do claim that not all phenomena are such like. It is possible that two (stable) phases may have an unstable transitional phase between them, as can be seen in the transition from liquid water to steam by boiling it. Often, the transitional phase is so gradual that it is difficult or impossible to determine, where the transitional phase begins and ends exactly, but despite being quite common, the existence of a transitional phase does not prove the nonexistence of the phases – rather the opposite. Good examples are dusk and dawn: the existence of dusk and dawn does not prove that there is no day and night. The idea of phases and transitional phases can be adapted to philosophy and applied to phenomena such as the famous sorites paradox¹⁸ or the bald man paradox¹⁹. The distinction between phases and transitional phases forms the core of our system of structural incommensurate factors,

¹⁷ But not in some other types of geometry.

¹⁸ «Indicate how many grains of sand you need to have in order to speak of a heap of sand!», cf. HYDE, DOMINIC, Sorites Paradox. In: Zalta, Edward N. (ed.), The Stanford Encyclopedia of Philosophy (Winter 2014 Edition), URL = <https://plato.stanford.edu/archives/win2014/entries/sorites-paradox/>.

¹⁹ «Indicate how many hairs a man is allowed to have, that you still can say he is bald!»

which are: (1) intrinsic incommensurability, (2) epistemic incommensurability (various degrees of ignorance, caused e.g. by blurring, obfuscation, etc.), (3) phase incommensurability (super-contrast, subliminal factors, over-threshold, and para-incommensurability) and (4) phase transition incommensurability (e.g. stochastic or chaotic).

Ad (4): In moral dilemmas there are four classes of content related incommensurate factors (=content related perspective): These are (1) mathematical and logical factors, (2) natural factors, (3) human factors, and (4) specific moral factors. Moral dilemmas share the first three classes with all other types of dilemmas. Of course, the last class refers only to moral dilemmas. This is to be discussed in detail now:

6. Systematization of Content-related Incommensurate Factors as Entanglement Sources in Moral Dilemmas

By combining the structural perspective and the content related perspective, one arrives at such a systematization. The logic of construction goes from abstract and general to ever more concrete phenomena. The substantive perspective sets the general framework and each content related class is dominated by different structural factors.

6.1. Mathematical and Logical Factors

Logics knows quite a lot of paradoxes²⁰, from which dilemmas can be derived as well, e.g. Jørgensen's dilemma²¹. Due to the limitations of space we will not discuss this in detail here. Important are the following two items:

Factors of probability: Probability and certainty are actually incommensurate factors. In particular, this applies to the incommensurability of factors with high effect but low risk and those with little effect and high risk, like e.g. nuclear reactor accidents versus traffic accidents.

Developmental processes: In addition, different types of development processes can be mentioned here: especially linear developments versus logarithmic development.

6.2. Natural Factors

As natural factors we take all factors of inanimate and animated nature except human mentality, sociality and culturality. Consequently, this ranges from (meta-)physical phenomena to biological ones:

Factors of phase incommensurability: here we propose the following subclasses:

- Super contrast: i.e. differences that are so enormous that they become incommensurable
- Subliminal factors: this means that phenomena are just below an assumed threshold, but they occur frequently. A well-known example are so-called micro aggressions and the problem is that the single act of aggression is so small, that even the proof of its existence is hard, but they are said to occur so frequently that in sum they make a big social problem.
- Over-threshold factors: means that phenomena are above the conceptual threshold, like nuclear accidents. «Life» is often like this, if it has to be compared with «minor» things like pain or injury.
- Para-incommensurability: This includes, for example, the distinction between Potentia and Actus, which is quite similar with probability already mentions above.

²⁰ Cf. CANTINI, ANDREA and BRUNI, RICCARDO, Paradoxes and Contemporary Logic. In: Zalta, Edward N. (ed.), The Stanford Encyclopedia of Philosophy (Fall 2017 Edition), URL = <https://plato.stanford.edu/archives/fall2017/entries/paradoxes-contemporary-logic/>.

²¹ McNAMARA, PAUL, Deontic Logic, The Stanford Encyclopaedia of Philosophy (Winter 2014 Edition), Zalta, Edward N. (ed.), URL = <https://plato.stanford.edu/archives/win2014/entries/logic-deontic/>, point 4.2.

Factors of transitional phase incommensurability: As already mentioned above, even if phases are characterized by relative stability, unknown and/or unstable transitional phases may occur between them. Such a transition may be serial or parallel and one of the best examples (for a serial transition) is the famous sorites paradox, where you are asked to indicate how many grains of sand you have to collect exactly so that it makes a heap of sand. In this example there is a transition from one phase (collection of sand grains) to another (heap of sand), thus one assumes that there necessarily exist two phases and some kind of transitional phase²² in between, but one doesn't know where the exact boundaries lie. The reason for this is quite controversial.²³

One has to distinguish between:

- Purely unknown transition boundaries: are best illustrated by the already mentioned sorites paradox; other well-known examples include dusk/dawn and puberty.
- Unstable (e.g. stochastic or chaotic) phase transitions: this is evident, as already stated, when one boils water, thus lets it transition from stable water to also rather stable steam.

6.3. Human Factors

By «human factors» we mean mental (psychological), social and cultural factors, including epistemic questions but excluding morally relevant factors that are discussed in the next section. Since phase factors and transitional phase factors belong to the last subsection there is only epistemic incommensurability left:

Epistemic incommensurability means comparing phenomena about which there are different degrees of knowledge or ignorance, such as

- Known and unknown factors in general
- Suspicious and non-suspicious factors: esp. suspicious of wrongdoing or mimicry

6.4. Specific Moral Factors

This can be divided into three subcategories, namely (1) aspects of moral parameters, (2) aspects of moral technology and (3) aspects of specific moral cultures, for all that has to do with the fact that people design technologies to achieve moral goals, such as historical moral systems such as the various moral systems of Christianity and, at least in part, the legal systems.

6.4.1. Aspects of Moral Parameters

This means all known moral incommensurate factors like moral goods, principles etc. when they have to be compared. The most important distinction is between uniparametric aspects and bi- and multiparametric aspects:

Uniparametric aspects

- Serial uniparametric factors: e.g. investment versus consume (like eating the seeds for the new harvest in case of hunger)
- Parallel uniparametric factors:
 - Objective perspective versus subjective perspective
 - Comparing the extends to which moral principles are reached and/or moral goods are saved or sacrificed (e.g. lifeboat dilemmas)

²² In such a temporal transformation also a simple border between to subsequent phases has to be assumed a transitional phase.

²³ HYDE, DOMINIC, Sorites Paradox. In: Zalta, Edward N. (ed.), The Stanford Encyclopedia of Philosophy (Winter 2014 Edition), URL = <https://plato.stanford.edu/archives/win2014/entries/sorites-paradox/>.

Bi- and multiparametric aspects

- Collisions between moral principles
 - Moral principles versus other moral principles (beneficence/maleficence versus justice or fairness versus freedom²⁴)
 - Moral goods versus other moral goods (Life versus happiness/suffering versus injury)
- Collisions between moral principles and other factors (compliance with principles versus consequences versus intentions)

6.4.2. Aspects of Moral Technology

When working with moral entities people usually build technologies bearing typical advantages and disadvantages like standard errors etc. Here two perspectives play a decisive role:

- The ex-ante perspective: Aspects of «moral lawmaking»
 - Phase problems
 - Moral principle setting in general
 - Balancing interests and justice (iustitia legalis), e.g. private versus public interest
 - Exception setting and hardship avoidance
 - Transitional phase problems
 - Defining the borders of categories
 - Defining thresholds categories
- The ex-post perspective: moral principle application and moral judgment
 - Execution/application
 - Moral principle application
 - Balancing interests and justice in application
 - Exception setting and hardship avoidance in application
 - Moral judgment, punishment and rewarding
 - Compliance with principles versus consequences versus intentions (e.g. guilt and innocence versus other factors)
 - Special justifications and excuses

6.4.3. Aspects of Specific Moral Cultures

This includes all factors coming from specific moral cultures of global or local provenience like Christian or Muslim moral, modern western moral etc. Included is the role of the modern state as a participant in moral technologies, which is an important factor of legal ethics.

7. Assessing the Dilemma of Implementing Connected Cars versus Data Protection

As stated in section 1 the dilemma of the connected car is constituted by the fact that it will probably save human life but that the necessary data aggregation will mean a high risk of abuse, so a risk to lose freedom. The core of the dilemma is a combination of (1) a multiparametric comparison between the public chance of saving human life versus the public risk of losing freedom and (2) an interfering conflict between the private

²⁴ Cf. BEAUCHAMP, TOM L./CHILDRESS, JAMES F., *Principles of Biomedical Ethics*, 7th edition, Oxford University Press, New York et al. 2012.

interest of selling and using connected cars versus the public risk of loosing freedom as a kind of collateral damage.

On the mathematical/logical and the human level there is only one interesting aspect, i.e. that all knowledge about the risks and chances is uncertain. But, lacking more detail information this is actually not relevant. The relevant things happen on the moral level: As already mentioned there are basically two interfering multiparametric comparisons:

1. Public chance of saving human life vs. public risk of loosing freedom
2. Private chance of selling and using connected cars vs. public risk of loosing freedom

But there is also some *super contrast* involved because saving human life is substantial whilst loosing freedom probably starts subliminal and only ends up to be substantial.

The aim of this paper was only to propose a draft of a framework for the systematization of dilemmas of legal ethics but in this stage we could not expect that it easily delivers solutions – although this of course is the ultimate goal. Nevertheless, since this is rather an easy case we are able to propose the following solution: If we take for granted that the risk of loosing freedom is serious and cannot be sufficiently handled later, the actually quite trivial solution is that people who make profit from connected cars, i.e. the public and the producers and the consumers, have to bear the costs for the prevention of the loss of freedom, i.e. they have to finance and implement a system where data cannot be abused. If not possible, connected cars should not be allowed on the streets.

8. Conclusion

The aim of this paper was to discuss the connected car as dilemma of legal ethics within a new framework. This framework consists of a new systematization of moral dilemmas, which was proposed here as a draft version and for the first time. Within this systematization moral dilemmas are interpreted as problems of rational justification caused by special entanglement problems. The latter themselves are caused by incommensurate factors, i.e. factors that prevent comparisons between moral factors. These incommensurate factors can be viewed from a structural and a content related perspective and in combining both one gets the aforementioned systematization. In general and also in our context incommensurability problems are difficult to solve. Nevertheless, also after our investigation workaround solutions seem still possible and further research should go into this direction, i.e. using the systematization for facilitating the solving dilemmas of legal ethics.