

On Balancing and Subsumption. A Structural Comparison*

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Abstract. The formal structure of subsumption may be represented in a deductive scheme, which one might call the "Subsumption Formula." The author argues that there is an analogous scheme for the formal structure of balancing or weighing, which he terms the "Weight Formula." In short, subsumption and balancing have comparable schemata, through which the formal structure of a set of premisses, which warrant the inference to a legal result, can be identified. The relation in the two cases between these premisses and the ensuing legal result is, however, different. The Subsumption Formula is represented by a scheme that works according to the rules of logic, the Weight Formula, by a scheme that works according to the rules of arithmetic. In spite of this difference, the two formulae are alike in that judgments, in both cases, remain the basis of the argument.

There are two basic operations in the application of law: subsumption and balancing. While subsumption has been clarified to a considerable degree in the last decades, where balancing is concerned there are still more questions than answers. The most important of these questions is whether or not balancing is a rational procedure.

I. The Subsumption Formula

To be sure, the rationality of the subsumption of a case under a rule has also been principally disputed. Here considerable progress has been made by distinguishing the formal structure of subsumption from the substantial argumentation adduced in the application of law. The formal structure of subsumption can be comprised in a deductive scheme, as follows:

- (1) $(x)(Tx \rightarrow ORx)$
- (2) $(x)(M^1x \rightarrow Tx)$
- (3) $(x)(M^2x \rightarrow M^1x)$

* I should like to thank Stanley L. Paulson for help and advice on matters of English style.

$$\begin{array}{l}
 \cdot \\
 \cdot \\
 \cdot \\
 (n + 2)(x)(Sx \rightarrow M^n x) \\
 (n + 3)Sa \\
 (n + 4)ORa \qquad (1) - (n + 3)
 \end{array}$$

This scheme is the most general subsumption scheme (Alexy 1989, 227). It shall be called the "Subsumption Formula." The Subsumption Formula exhibits the kinds of premisses involved in subsumption. (1) is a norm, either expressed in a statute or arrived at by the judiciary. (2) – (n + 2) are semantic rules connecting the concept used to give expression to the antecedent condition of the norm (T) with the concept used to describe the case (S). (n + 3) is the description of the case. (n + 4), finally, is the legal judgment expressing the solution of the case. (n + 4) follows logically from (1) – (n + 3). The following is an example:

- (1) Whoever commits murder (T), is to be punished by life imprisonment (OR).
- (2) Whoever treacherously kills a human being (M^1), commits murder (T).
- (3) Whoever knowingly takes advantage of the victim's unsuspecting and defenceless condition, to kill him or her (M^2), treacherously kills a human being (M^1).
- (4) Whoever kills a sleeping person in the absence of any special defensive precautions taken by the victim (S), knowingly takes advantage of the victim's unsuspecting and defenceless condition, to kill him or her (M^2).
- (5) a has killed a sleeping person in the absence of any special defensive precautions taken by the victim (S).
- (6) a is to be punished by life imprisonment (OR). (1)–(5)

It is easy to see that the application of the law is not exhausted by a deduction of this kind. There are two reasons for this. The first is that it is always possible that another norm, requiring another solution, is applicable. If this is the case, the question of precedence arises. The answer to this question may involve balancing, but it must not do so. Often meta-rules like *lex superior derogat legi inferiori*, *lex posterior derogat legi priori*, or *lex specialis derogat legi generali* are applicable. In order to arrive at a solution, a second subsumption has to be performed under such a meta-rule. One might call this second subsumption "meta-subsumption." So long as conflicts of norms are resolved by meta-subsumption, we remain within the realm of subsumption. As soon as we resort, however, to balancing to resolve the conflict, we shift over from subsumption at the first level to balancing at the second level. All of this has enjoyed a good deal of attention in the discussions on

non-monotonic reasoning in law (Sartor 1994, 191–4). The only point of interest here is that the resolution of a conflict of norms either by meta-subsumption or by balancing presupposes a subsumption at the first level that must exhibit, in one way or another, a deductive structure. The Subsumption Formula is an attempt to formalize this deductive structure by means of standard logic. The question of whether standard logic ought to be modified in light of the fact that for the resolution of conflicts subsumption at the first level is often not the last word,¹ may remain open here. All aspects of the structure of subsumption that are of interest here remain the same whether we use standard logic or some species of non-standard logic. The second reason for the rudimentary character of the Subsumption Formula concerns not the relation between different deductions leading to different results but the structure of the deduction itself. In order to justify a judgment, it is not enough that some premisses from which it follows logically can be set out. The premisses themselves must be justified. This shows that here, too, two stages or levels of justification of a legal judgment can be distinguished. The first consists of the deduction of the legal judgment from premisses as represented by the Subsumption Formula. This can be called the “internal” (Wróblewski 1974, 39; Alexy 1989, 221) or “first-order justification” (MacCormick 1978, 101).² The second stage or level concerns the justification of the premisses used in the internal or first-order justification. This is the external or second-order justification. Here all kinds of arguments admissible in legal discourse may be adduced.

One might object that this two-stage conception of subsumption is artificial and, therefore, unnecessary on the ground that all substantial decisions are arrived at in the external justification. The deductive apparatus of the internal justification could then be dismissed as purely formalistic. This, however, would be a gross underestimation of the rational power of formal structures. The Subsumption Formula shows both what kinds of premisses are necessary in order to justify a legal judgment and how these premisses must be related to each other. By this, a skeleton is incorporated into the give-and-take of legal argument, which defines, at one and the same time, first, minimal requirements of rationality and, second, the starting points of any attempt to achieve—in the context of external justification—more than the level of rationality defined by these minimal requirements.

II. Acceptance in Practice and Scepticism in Theory

These considerations give rise to the question of whether something similar is not possible in the realm of balancing. This question is of genuine

¹ Cf. Prakken 1997, 150–6, who proposes a defeasible implication in place of standard implication as used in the Subsumption Formula. For a defense of standard implication, cf. Alexy 2000, 70–2.

² Other nomenclature is found in Koch and Rüßmann 1982, 56, and Buchwald 1990, 277.

practical interest. Balancing, on the one hand, is ubiquitous in law. There are, of course, many cases that can be solved simply by means of subsumption. Hard cases, however, are defined by the fact that there are reasons both for and against any resolution under consideration. Most of these collisions of reasons have to be resolved by means of balancing. This general reason for the ubiquity of balancing is reinforced by a reason based on the structure of the constitutional state. If the constitution guarantees constitutional rights, then many or even all legal decisions restricting the freedom of individuals have to be understood as interferences with constitutional rights. Interferences with constitutional rights are admissible, however, only if they are justified, and they are justified only if they are proportional. Proportionality-judgments, however, presuppose balancing.

This vivid and dominant role of balancing in legal practice contrasts in a somehow disturbing way with a widespread and deep scepticism concerning the rationality of balancing in law. Habermas and Schlink are two prominent representatives of this sceptical view. According to Habermas, there are no rational standards for balancing or weighing:

Because there are no rational standards for this, weighing takes place either arbitrarily or unreflectively, according to customary standards and hierarchies. (Habermas 1996, 259)

Schlink expresses the same thesis by saying that balancing, in the end, boils down to “subjective and decisionistic evaluations” (Schlink 2001, 460).

Habermas and Schlink would be right if there were no structure making it possible for one to construct balancing as a rational form of argumentation. In order to show that such a structure does indeed exist, I shall turn to reasoning in constitutional law. It is here that the technique of balancing has been developed with the greatest degree of sophistication.

III. The Law of Balancing

Balancing can be considered as a part of what is required by a more comprehensive principle, the principle of proportionality. This principle, which—either implicitly or explicitly—is applied nearly everywhere where constitutional review powers are exercised, is of considerable internal complexity. It comprises three sub-principles: the principle of suitability, of necessity, and of proportionality in the narrower sense. Here only the last of these principles is of interest. It can be expressed as a rule, termed the “Law of Balancing.” This states:

The greater the degree of non-satisfaction of, or detriment to, one right or principle, the greater must be the importance of satisfying the other. (Alexy 2002a, 102)

The Law of Balancing shows that balancing can be broken down into three stages. The first stage involves establishing the degree of non-satisfaction

of or detriment to the first principle. This is followed by a second stage in which the importance of satisfying the competing principle is established. Finally, in the third stage it is established whether the importance of satisfying the latter principle justifies the detriment to or non-satisfaction of the former. If it were not possible to make rational judgments about, first, intensity of interference, second, degrees of importance, and, third, their relationship to each other, then the objection raised by Habermas and Schlink would be justified. Everything turns, then, on the possibility of such judgments.

How can one show that rational judgments about intensity of interference and degrees of importance are possible, such that an outcome can be rationally established by way of balancing? One possible method is the analysis of examples, an analysis which aims at bringing to light what we presuppose when we decide cases by balancing. As an initial example, I shall take up a decision of the German Federal Constitutional Court on health warnings (Decisions of the Federal Constitutional Court, *BVerfGE* vol. 95, 179). The Court considers the duty of tobacco producers to place health warnings respecting the dangers of smoking on their products to be a relatively minor or light interference with freedom to pursue one's profession (*Berufsausübungsfreiheit*). By contrast, a total ban on all tobacco products would count as a serious interference. Between such minor and serious cases, others of moderate intensity of interference can be found. In this way, a scale can be developed with the stages "light," "moderate" and "serious." Our example shows that valid assignments following this scale are possible.

The same is possible on the side of the competing reasons. The health risks resulting from smoking are great. The reasons justifying the interference therefore weigh heavily. If in this way the intensity of interference is established as minor, and the degree of importance of the reasons for the interference as high, then the outcome of examining proportionality in the narrow sense can well be described—as the Federal Constitutional Court in fact described it—as "obvious" (*BVerfGE* vol. 95, 173, 187).

Now one could take the view that the example does not tell us very much. On the one hand, there are economic activities, on the other, quantifiable facts. That makes scales possible. This is not applicable to areas in which quantifiable factors such as costs and probabilities play no role, or at any rate no significant role.

To deal with this objection, I shall consider a second case, one that concerns the classic conflict between freedom of expression and personality rights. A widely-published satirical magazine, *Titanic*, described a paraplegic reserve officer who had successfully carried out his responsibilities, having been called to active duty, first as a "born Murderer" and in a later edition as a "cripple." The Düsseldorf Regional Court of Appeal ruled against *Titanic* in an action brought by the officer and ordered the magazine to pay damages in the amount of DM 12,000. *Titanic* brought a constitutional

complaint. The Federal Constitutional Court undertook “case-specific balancing” (*BVerfGE* vol. 86, 1, 11) between the freedom of expression of those associated with the magazine (Article 5 (1) (1) of the Basic Law) and the officer’s general personality right (Article 2 (1) in connection with Article 1 (1) of the Basic Law). To this end, the intensity of interference with these rights was determined and they were set in relation to each other. The judgment in damages was treated as representing a “lasting” (*BVerfGE* vol. 86, 1, 10) or serious interference with freedom of expression. This conclusion was justified, above all, by the argument that awarding damages could affect the future willingness of those producing the magazine to carry out their work in the way they had done heretofore. The description “born Murderer” was then placed in the context of the satire published by the *Titanic*. Here several persons had been described as having a surname at birth in a “recognizably humorous” way, from “puns to silliness”; for example, Richard von Weizsäcker, then Federal President, was described as a “born Citizen” (*BVerfGE* vol. 86, 1, 11). This context made it impossible to see in the description an “unlawful, serious, illegal breach of personality” (*BVerfGE* vol. 86, 1, 12). The interference with the personality right was thus treated as having a moderate, perhaps even only a light or minor intensity. Corresponding to this, the importance of protecting the officer’s personality right through an award of damages was moderate, and perhaps only light or minor. These assessments completed the first part of the judgment. In order to justify an award of damages, which is a serious interference with the constitutional right to freedom of expression, the interference with the right to personality, which was supposed to be compensated for by damages, would have had to have been at least as serious. But according to the assessment of the Federal Constitutional Court, it was not. That meant that the interference with the freedom of expression was disproportionate, which meant in turn that calling the officer “born Murderer” was not a ground for awarding damages.

The case of the description of the officer as a “cripple” was, however, a different matter. According to the assessment of the Federal Constitutional Court, this description was a “serious breach of the paraplegic’s personality right” (*BVerfGE* vol. 86, 1, 13). The importance of protecting the officer by means of a judgment for damages was therefore great. This was justified by the fact that describing a severely disabled person as a “cripple” is currently seen as “humiliating” and as expressing a “lack of respect.” Thus, the serious interference with the freedom of expression was countered by the great importance accorded to the protection of personality. In this situation, the Federal Constitutional Court came to the conclusion that it could “see no flaw in the balancing to the detriment of freedom of expression” (*ibid.*). *Titanic*’s constitutional complaint was thus only justified to the extent that it related to damages for the description “born Murderer.” As far as the description “cripple” was concerned, it was unjustified.

Of course one can argue about whether the description “born Murderer” really represents nothing more than a moderate or minor interference. For present purposes, however, the significant point lies elsewhere. It can hardly be doubted that the awarding of damages and the description of someone as a “cripple” are both very intensive interferences with the relevant principles. Indeed, respecting the severely disabled, one can move to a characterization of this that goes beyond the Courts. The Federal Constitutional Court rightly held that describing a paraplegic as a “cripple” was humiliating and disrespectful. Such public humiliation and lack of respect reaches to and undermines the very dignity of the victim. This is not only serious in itself, it is a very serious or an extraordinarily serious violation. One has reached an area in which interferences can hardly ever be justified by any strengthening of the reasons for the interference. This corresponds to the law of diminishing marginal utility (Alexy 2002a, 103). The Titanic Case is thus an example not only of the fact that scales which can intelligently be set in relation to each other are possible even in the case of immaterial goods such as personality and free speech but also of the power inherent in constitutional rights as principles to set limits by means of balancing, which while not rigid and ascertainable without balancing, are nonetheless firm and clear.

The Tobacco and Titanic Judgments show that rational judgments about degrees of intensity and importance are possible at least in some cases, and that such judgments may be set in relation to each other for the sake of justifying an outcome.

Of course, such judgments presuppose standards that are not themselves to be found in the Law of Balancing. Establishing that a judgment against the Titanic to pay damages is a serious interference with freedom of expression makes assumptions about what threatens freedom of expression. On the other hand, the judgment that the description “cripple” is a serious violation of personality requires assumptions about what it means to be a person and have dignity. But that does not mean, to use Habermas’s words, that “weighing takes place either arbitrarily or unreflectively, according to customary standards and hierarchies” (Habermas 1996, 259). The assumptions underlying judgments about intensity of interference and degree of importance are not arbitrary. Reasons are given for them, and they are understandable. It is also questionable whether these assumptions are made by the Federal Constitutional Court “unreflectively, according to customary standards and hierarchies.” It is true that the standards follow a line of precedent. But talk of “customary standards” would be justified only if the existence of precedent were the only matter relevant to the decision, and not their correctness. Furthermore, one could talk of “unreflective” application only if this application did not take place in the course of argumentation. For arguments are the public expression of reflection. But there is no lack of argumentation. All this applies to the Tobacco Judgment as well.

IV. The Triadic Scale

Up until now, I have only considered examples. They have shown that there are cases in which balancing provides a result in a rational way. In order to make clear how and to what degree this is possible, the system underlying balancing will now be considered.

All the judgments about intensity of interference and degrees of importance which have been considered up to now follow a three-grade or triadic model. To be sure, the three steps or grades are not necessary for balancing. Balancing is possible once one has two steps, and the number of steps is open to the top. What follows also applies, with some modifications, if one reduces the number of steps to two or increases it to more than three. The only proviso is, as will be explained later, that the number must not become too high. The triadic scale has, compared with its alternatives, the advantage that it fits especially well into the practice of legal argumentation. In addition to this, it can be extended in a highly intuitive way.

The three stages can, as the examples show, be characterized by the terms "light," "moderate" and "serious." Representation is made easier if these stages are identified by the letters "l," "m" and "s" respectively. "l" stands here not just for the common term "light" but also for other expressions such as "minor" or "weak," and "s" includes "high" and "strong" as well as "serious."

Under the Law of Balancing, the objects of evaluation as *l*, *m* or *s* are the degree of non-satisfaction of, or detriment to, one principle and the importance of satisfying another. Instead of "degree of non-satisfaction or detriment" one could also talk in terms of the "intensity of interference." " P_i " shall be used as a variable for the principle the infringement with which is to be examined, and " I_i " shall represent the intensity of interference with P_i .³ Interferences are always concrete interferences. Intensity of interference is thus always a concrete quantity. As such it is different from the abstract weight of P_i . The abstract weight of P_i is the weight which P_i has relative to other principles independently of the circumstances of any cases. It shall be represented by " W_i ." Many constitutional principles do not differ in their abstract weight. Some, however, do. The right to life, for instance, has a higher abstract weight than the general freedom of action. If the abstract weight of colliding principles is equal, it can be disregarded in balancing. The Law of Balancing names as the first object of balancing only the intensity of interference. This shows that it is shaped for the situation in which the abstract weights are equal, that is, they play no role at all. It shall suffice to say so much, here. The question of how to elaborate the Law of Balancing when the abstract weights differ will be discussed later.

³ In Alexy 2002a, 406, a more complex notation is used for reason of plasticity. The intensity (I) of interference in P_i as a concrete (C) value is represented there as " IP_iC ." IP_iC is identical with I_i . The same applies, *mutatis mutandis*, for all other elements involved in balancing.

The second quantity in the Law of Balancing is the importance of satisfying the other principle. By contrast with the intensity of interference, the degree of importance is not necessarily exclusively a concrete quantity. One can use a concept of importance which combines concrete and abstract quantities. This, however, will not be done here. As already mentioned, the first part of the Law of Balancing deals only with a concrete quantity. Then, the second part must do so, too. The abstract weights can either be neglected on both sides, because they are equal, or they must be taken into account on both sides, because they are different. In the latter case, on both sides two quantities must appear, a concrete one and an abstract one.

But what is to be understood under the concrete importance of the other principle, which shall be represented by " P_j "? Because the Law of Balancing concerns exclusively the relation between the two colliding principles P_i and P_j , the concrete importance of P_j , which shall be represented by " I_j ,"⁴ can only depend on the effects which the omission of the interference with P_i would have for P_j . The meaning of this can be illustrated from the Titanic Case. We are only concerned with the description of the paraplegic officer as a "cripple." In order to determine the intensity of interference with freedom of expression (I_i), one only has to ask how intensively the prohibition of this expression combined with an award of damages interferes with freedom of expression (P_i). That is what the constitution would require of this constitutional right if it were to permit the prohibition contained in the judgment of the Düsseldorf Higher Regional Court of Appeal along with the award of damages. In order to establish the concrete importance (I_j) of satisfying the principle of protecting personality (P_j), one has to ask in reverse what omitting or not implementing the interference with freedom of expression, that is, treating the description "cripple" as permitted and not subject to damages, would mean for the protection of personality. But this is none other than the cost to the protection of personality if freedom of expression were to be preferred. The importance of the principle of protecting personality in the Titanic case can thus be derived from the intensity with which non-interference in *Titanic's* freedom of expression would interfere with the officer's personality right. This can be generalized and stated as follows: The concrete importance of P_j is the same as the intensity with which the non-interference with P_i interferes with P_j . This shows that the concept of concrete importance of P_j is identical with the concept of the intensity of interference with P_j by omitting the interference with P_i . The Law of Balancing demands a comparison of the intensity of an actual interference with the intensity of the hypothetical interference, that would be inevitable if the actual interference were omitted. For this reason on both sides the concept of intensity can be applied.

⁴ In Alexy 2002a, 406, the concrete importance of satisfying P_j has not been represented by " I_j " but by " SP_jC ." " S " in this expression is alluding to "satisfying."

The objects of evaluation as *l*, *m* or *s* have now been established. In setting out the Law of Balancing, it was stated that it breaks the balancing process down into three steps. The first two can now be carried out in our triadic model: evaluating I_i as *l*, *m* or *s* and evaluating I_j as *l*, *m* or *s*. The question is now how the third step can be carried out, in which the evaluations are to be set in relation to each other.

It might be objected that evaluations of this kind cannot be set in relation to each other, for the actual and hypothetical interferences in the colliding principles are incommensurable (Aleinikoff 1987, 972–6). In the Titanic Case, for instance, it might be claimed that the description as “born Murderer” and the order to pay damages of DM 12,000 are two social facts which have less in common than apples and oranges. This, however, does not speak to the decisive point. The question is not the direct comparability of some entities, but the comparability of their importance for the constitution, which of course indirectly leads to their comparability. The concept of importance for the constitution contains two elements which suffice to bring about commensurability. The first is a common point of view: the point of view of the constitution. It is, naturally, possible to have a dispute about what is valid from this point of view. Indeed, this occurs regularly. It is, however, always a dispute about what is correct on the basis of the constitution. Incommensurability, indeed, comes into being immediately, once the common point of view is given up. This would, for example, be the case if one interpreter of the constitution were to say to the other that from his point of view the one thing is valid, and from that of the other the opposite, so that each is right from his point of view, and neither of them can be wrong or even criticized, because a common point of view from which anything could be proven as wrong neither exists nor could exist. Discourse which is more than empty rhetoric, that is, rational discourse about the right or correct solution, would then be impossible. Now, the opposite is valid, too. If rational discourse about what is correct on the basis of the Constitution is possible, then a common point of view is possible. It becomes real as soon as rational discourse begins which is oriented to the regulative idea of what is correct on the basis of the constitution. Whoever wants to undermine the possibility of evaluations by appeal to the impossibility of a common point of view must then be prepared to claim that rational discourse about evaluations in the framework of constitutional interpretation is impossible. This claim must be repudiated, even if the repudiation cannot be elaborated here (Alexy 1989, 33–173). The second element which brings about commensurability is a scale of whatever kind that represents the classes for the evaluation of the constitutional gains and losses. The triadic scale *l*, *m*, *s* is an example. Its use on the basis of a common point of view brings about commensurability.

Once commensurability is created by point of view and scale, the question of how the third step of balancing can be carried out proves to be easy.

If one considers the possible permutations in the triadic model, there are three circumstances in which the interference with P_i is more intensive than that with P_j :

- (1) $I_i: s, I_j: l$
- (2) $I_i: s, I_j: m$
- (3) $I_i: m, I_j: l$

In these cases P_i precedes P_j . These three cases of the precedence of P_i are matched by three cases of the precedence of P_j :

- (4) $I_i: l, I_j: s$
- (5) $I_i: m, I_j: s$
- (6) $I_i: l, I_j: m$

In addition to these six cases, which can be decided on the base of the triadic scale, there are three stalemate situations:

- (7) $I_i: l, I_j: l$
- (8) $I_i: m, I_j: m$
- (9) $I_i: s, I_j: s$

In case of a stalemate balancing does not determine a result. This is a case of discretion in balancing that is of the greatest importance for the delimitation of the competences of that part of the judiciary that executes constitutional review on the one hand, and those of the legislator on the other hand. But this cannot be discussed here (cf. Alexy 2002b, 18–27).

V. The Weight Formula

The three steps or classes of the triadic model represent a scale which attempts to systematize classifications which can be found both in everyday practice and legal argumentation. Such a three-class system is far removed from a metrification of intensities of interference and degrees of importance on a cardinal scale such as a scale from 0 to 1, and it has to be far removed, because intensities of interference and degrees of importance are not capable of metrification on such a scale (Alexy 2002a, 99). It is true that it is often possible to use a refined triadic model—an eligible candidate is a nine-stage double-triadic model—but there are limits. Graduation in terms of light, moderate or serious is often difficult enough as it is. In some cases one can just barely distinguish light and serious, and in some cases even that seems impossible. Legal scales can thus only work with relatively crude divisions, and not even that in all cases. In the end, it is the nature of constitutional law which sets limits to fineness of graduation and altogether excludes the

applicability of any infinitesimal scale (Alexy 2002b, 25f.). Calculable measurements by way of a continuum of points between 0 and 1 cannot apply. Nevertheless, what is possible is an illustration of the structure underlying the triadic model with the help of numbers. Against this background, it is possible to create a formula which expresses the weight of a principle under the circumstances of the case to be decided, in short, its *concrete weight*. It goes:

$$W_{i,j} = \frac{I_i}{I_j}$$

This formula is the most elementary version of a more comprising formula which can be called "Weight Formula." The one symbol it contains which has not yet been introduced is " $W_{i,j}$." " $W_{i,j}$ " must not be confounded with " W_i ." " W_i " represents, as already explained, the abstract weight of P_i . In contrast to that " $W_{i,j}$ " stands for the concrete weight of P_i , that is, the weight of P_i under the circumstances of the case to be decided. The Weight Formula makes the point that the concrete weight of a principle is a relative weight. It does this by making the concrete weight the quotient of the intensity of interference with this principle (P_i) and the concrete importance of the competing principle (P_j), that is, the intensity of the hypothetical interference with P_j caused by omitting the interference with P_i . Now one can only talk about quotients in the presence of numbers, which is not the case in any direct sense with balancing. So concrete weight can only really be defined as a quotient in a numerical model which illustrates the structure of balancing. In legal argumentation it is only analogous to a quotient. But the analogy is an interesting one.

There are various possibilities for allocating numbers to the three values of the triadic model. A rather simple and at the same time highly instructive one consists in taking the geometric sequence 2^0 , 2^1 and 2^2 , that is, 1, 2 and 4. On this basis, l has the value 1, m the value 2 and s the value 4.

In all cases in which P_i takes precedence over P_j , the value of $W_{i,j}$ is greater than 1:

- (1) $s, l = 4/1 = 4$
- (2) $s, m = 4/2 = 2$
- (3) $m, l = 2/1 = 2$

If P_j takes precedence over P_i , it sinks below 1:

- (4) $l, s = 1/4 = \frac{1}{4}$
- (5) $m, s = 2/4 = \frac{1}{2}$
- (6) $l, m = 1/2 = \frac{1}{2}$

In all stalemate cases the concrete weight of P_j is the same, namely 1:

- (7) $l, l = 1/1 = 1$
- (8) $m, m = 2/2 = 1$
- (9) $s, s = 4/4 = 1$

At first glance the choice of a geometric sequence seems to have no advantage over an arithmetic sequence like 1, 2 and 3 inserted in a formula which determines the concrete weight of P_i by the difference between I_i and I_j :

$$W_{i,j} = I_i - I_j$$

All stalemate cases would have the value 0, all cases of precedence of P_i over P_j a value greater than 0 ($s, l = 2, s, m = 1, m, l = 1$), and all cases of precedence of P_j over P_i a value lower than 0 ($l, s = -2, m, s = -1, l, m = -1$). This seems to be at least as instructive an illustration as that which can be achieved by using geometric sequences. The picture changes, however, if the triadic model is extended to a double-triadic model. In order to achieve this, one only has to apply the three classes to each in turn. In this way one can establish a nine-stage model, which can be represented as follows: (1) ll , (2) lm , (3) ls , (4) ml , (5) mm , (6) ms , (7) sl , (8) sm , (9) ss . This division expresses the idea that there are not simply light, moderate and serious interferences, but also very serious (ss), moderately serious (sm) and less serious (sl) interferences, moderate interferences at the top of the range (ms), in the middle (mm) and at the bottom (ml), and minor interferences in the upper (ls) and middle (lm) ranges, as well as very trivial interferences (ll). It is of considerable interest that the descriptions of these nine classes are quite easy to understand, whereas the classes of a threefold-triadic model would become, apart from the areas at the extremes, incomprehensible. How, for example, is one supposed to understand "seriously slightly moderate"? It seems that this conjunction of three classes exceeds our power of understanding; if not, a conjunction of four classes would surely do. The propositions expressing the classifications, however, must be understandable, for they have to be justified, and justification presupposes understanding. This is the reason for the limits of refinements of scale. In any case, the nine classes of the double-triadic model fit well into our practice of legal and moral reasoning, even if they cannot be applied in all cases.

These nine classes can be represented geometrically as well as arithmetically. In the first case, the double-triadic model is expressed by the values 2^0 to 2^8 , in the second, by the values 1 to 9. The difference becomes clear when one compares the values which are assigned to a constitutional right in the least justified case of interference. In the double-triadic model, the least justified interference is represented by the combination ss, ll . An example is a lifelong imprisonment, which is a very serious (ss) interference with

freedom, for the reason of having thrown a cigar stub into the street, which is a very light (*ll*) reason for imprisonment. The arithmetic sequence leads on the basis of the value 9 (*ss*) and 1 (*ll*) to 8 as expression of the concrete weight of the constitutional guarantee of freedom in this case. In contrast to this, the geometric sequence leads on the basis of the values 2^8 (*ss*) and 2^0 (*ll*) to a rise of the concrete weight of freedom to 256. This overproportional growth of concrete weight fits well with the fact that the power of rights increases overproportionally with increasing intensity of interference.

It has already been mentioned that not only the intensity of interference (*I*) but also the abstract weights (*W*) can play a role in balancing. As long as the abstract weights are equal, they neutralize each other. In this case, it does not matter whether they are inserted into the Weight Formula, for once they are inserted they can be reduced. But when they are different, the result of balancing can depend on this difference. This is expressed by the following enlargement of the most elementary version of the Weight Formula:

$$W_{i,j} = \frac{I_i \cdot W_i}{I_j \cdot W_j}$$

If one assumes that the abstract weights have the same impact for the concrete weight as the intensity of interference, one can express the values of W_i and W_j by the same triadic scale as in the case of I_i and I_j .

The third pair of variables which must be inserted in order to make the Weight Formula complete refers to the reliability of the empirical assumptions concerning what the measure in question means for the non-realization of P_i and the realization of P_j under the circumstances of the concrete case. This can be denoted by " R_i " and " R_j ." The relationship of R_i and R_j to $W_{i,j}$ is based on a second Law of Balancing. It goes:

The more heavily an interference with a constitutional right weighs, the greater must be the certainty of its underlying premisses.

Unlike the first Law of Balancing, this second law does not refer to the substantive importance of the reasons underlying the interference, but to their epistemic quality. The first Law of Balancing can therefore be called the "Substantive Law of Balancing," and the second the "Epistemic Law of Balancing." The incorporation of the Epistemic Law of Balancing leads to the complete Weight Formula, which runs as follows:

$$W_{i,j} = \frac{I_i \cdot W_i \cdot R_i}{I_j \cdot W_j \cdot R_j}$$

Again, the question of scales raises. The Federal Constitutional Court attempted to distinguish three different degrees of intensity of review: an

“intensive review of content,” a “plausibility review” and an “evidential review” (*BVerfGE* vol. 50, 290, 333). This brings a triadic epistemic model into play which has a high degree of formal similarity to the substantive triadic model set out above, and which can be built into the Weight Formula without any great difficulty. The three classes of the epistemic triadic model are the classes of certain or reliable (*r*), maintainable or plausible (*p*), and not evidently false (*e*). The fact that the power of defence as well as the power of attack declines with increasing uncertainty of the premisses backing the respective side can be expressed by assigning *r* the value 2^0 , *p* the value 2^{-1} and *e* the value 2^{-2} . Of course, a refinement of the triad is possible here as well.

Often courts do not explicitly assign a value to all elements relevant in balancing. The Weight Formula can then be used to infer those values which have not been determined. The Cannabis Judgment of the Federal Constitutional Court offers an example. Whether the legislature is allowed to prohibit cannabis products depends mainly on whether the interference with constitutionally protected liberty caused by the prohibition is suitable and necessary to combat the dangers associated with the drug. If criminal prohibition were not suitable or not necessary, it would be definitively prohibited on account of constitutional rights. The court explicitly states that the legislature’s empirical premisses were uncertain. It considered it adequate that the empirical assumptions of the legislature were “maintainable” (*BVerfGE* vol. 90, 145, 182). This can be grasped by the Weight Formula in the following way: I_i stands for the interference with the constitutionally protected liberty caused by the prohibition of cannabis products. I_j represents the losses caused on the side of collective goods, especially public health, if cannabis products were not prohibited. The abstract weights of the colliding principles P_i and P_j shall be considered as equal, which allows one to neglect them. If cannabis products are prohibited, the interference with P_i must be considered as certain. The value of R_i is therefore $2^0 = 1$. R_j stands in our case for the reliability of the empirical assumption of the legislator that the prohibition of cannabis products was necessary in order to avoid dangers for collective goods, especially public health. The Courts classes R_j as “maintainable,” that is, as *p*. If one presupposes the simple triadic model, R_j receives by this explicitly the value $2^{-1} = \frac{1}{2}$. From this and the fact that the Court considered prohibition of cannabis products as constitutional, it follows that the interference with P_i is not of the highest degree. Its highest possible value is 2, that is *m*. This becomes clear by putting the following values into the Weight Formula:

$$1 = \frac{2 \cdot 1}{4 \cdot \frac{1}{2}}$$

R_j must be $\frac{1}{2}$ because the Court explicitly assumes this degree of reliability. R_i must be 1, because interference in case of prohibition is certain. W_{ij} must not be more than 1, for if it exceeds 1 the prohibition would be unconstitutional. The Court, however, declares the prohibition constitutional. In this constellation the highest possible value which I_i can achieve is 2, that is, moderate, because I_j cannot achieve in the simple triadic model a higher value than 4, that is, s . This demonstrates that the Weight Formula allows one to grasp the interplay between the six elements which are relevant in order to determine the concrete weight of a principle in case of a collision of two principles. If more than two principles are involved, the Weight Formula has to be elaborated further, but this shall not be considered here (cf. Alexy 2003, 791f.).

We started with the question of whether there exists a formal structure of balancing which is in some way similar to the general scheme of subsumption. The answer that can now be given is positive. In spite of some important differences the similarity is striking. In both cases a set of premisses can be identified from which the result can be inferred. Neither the Subsumption Formula nor the Weight Formula contributes anything directly to the justification of the content of these premisses. To this extent both are completely formal. But this cannot diminish the value of identifying the kind and the form of the premisses which are necessary in order to justify the result. The relation between these premisses and the result is, however, different. The Subsumption Formula represents a scheme which works according to the rules of logic; the Weight Formula represents a scheme which works according to the rules of arithmetic. But this difference must not be overestimated. The real premisses of the Weight Formula are not numbers but judgments about degrees of interference, the importance of abstract weights and degrees of reliability. The Subsumption Formula and the Weight Formula are to this extent on the same footing, as judgments remain in both cases the basis. The Subsumption Formula connects them directly through rules of logic, the Weight Formula indirectly or analogously by interpreting the judgments through numbers. This seems to be the most interesting formal difference between the two formulas. This difference is an expression of two dimensions of legal reasoning, a classifying one and a graduating one, which can and must be combined in many ways in order to realize as much rationality in legal argumentation as possible. But to explore this combination would mean addressing another theme (cf. Stück 1998, 405ff.).

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