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Problems of Incommensurability

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Abstract: This essay discusses implications of incommensurability of values for justified decision-making, ethics and justice. Under particular conditions incommensurability of values causes what might be called 'incomplete comparability' of options. Some leading theorists interpret this in terms of 'imprecise equality' and 'imprecise comparability.' This interpretation is mistaken and conceals the implications of incommensurability for practical and ethical reasoning. The aim of this essay is to show that, in many cases, incommensurability prevents the assignment of determinate weights to competing values. This may have problematic consequences for a complete and impartial justification of decisions concerning conflicting values to the extent that they depend on the need of *weighing* them.

Keywords: Ethics, practical reason, incommensurability, incomparability, incomplete comparability, justice, public decision-making, weighing values

1. Introduction

The philosophical literature on incommensurability of values is extensive but pays remarkably little attention to its implications for justified decision-making, especially in ethics and justice. The aim of this essay is to bridge this gap. It challenges the widespread belief that incommensurability does not cause significant problems for practical reasoning.[1] I will argue that incommensurability may have important consequences for the comparability of alternative options and for an adequate justification of important human decisions. In *The Concept of Law* Hart discusses the question of how to rationally and justifiably choose between competing public policies. A policy that is better for society in one respect may conflict with a policy that is better for society in another

1. Philosophers who largely deny significant problems of incommensurability for practical reason are, amongst others, Chang, "Introduction"; Chang, "The Possibility of Parity"; Chang, *Making Comparisons Count*; Griffin, "Incommensurability"; Griffin, *Well-Being*; Hsieh, "Is Incomparability a Problem for Anyone?"; Richardson, *Practical Reasoning about Final Ends*, chapter 6; Sen, "Incompleteness and Reasoned Choice"; and Stocker, *Plural and Conflicting Values*. Also Joseph Raz, who believes that "incommensurability of the value of options is a pervasive feature with far-reaching theoretical consequences," nevertheless thinks that incommensurability does not prevent a rationally justified choice. See Raz, "Incommensurability and Agency," 128; and *The Morality of Freedom*, chap. 13.

respect. As Hart argues, a choice may be justified if the chosen policy yields the greater overall contribution to the public good.[2] However, Hart continues, if the relevant policies concern heterogeneous goods, "there seems to be no scale by which the alternative contributions to the common good can be measured and the greater identified."[3] Hart's concern expresses a possible problem of incommensurability, which can be summarized as follows: How can we adequately compare, and make a rationally justified choice between, two rival options if one is better with respect to one value and the other is better with respect to a competing value, while the two values are incommensurable? If the options concern important but conflicting human values, competing ethical demands or rival claims of justice we need a justification of the choice in order to avoid arbitrariness. There are many examples of rival options which embody important but conflicting prudential, political or ethical values: for instance, a policy that is better for economic growth versus one that is better for the environment; a policy that produces greater public security versus one that better protects personal privacy; a larger increase of total welfare versus a more equal distribution of welfare; more liberty versus more equality of opportunity in school education; a fairer versus a more efficient allocation of scarce health care resources.[4] Many believe that if we want a non-arbitrary and rationally justified resolution of conflicting values or competing ethical principles, we must know how to assign weights. A central question to be discussed is whether we can rationally, impartially and determinately weigh rival options if the relevant values are incommensurable. I will argue that, under particular conditions, incommensurability of values leads to what might be called incomplete comparability of options, which prevents the assignment of determinate weights. The incomplete comparability and lack of determinate weights makes a non-arbitrary, impartial and justified resolution of the conflict impossible.

2. Hart, *The Concept of Law*, 167.
3. Chang ("Introduction," 255n3) drew my attention to Hart's consideration. However, she rejects his suggestion that the lack of a common scale of units of value entails incomparability, because ordinal instead of cardinal comparisons can be made; see note 6 below.
4. The latter example will be discussed in detail in §§4.1–4.3. Some values or goods are not inherently or completely incompatible, but contingently or partially: they cannot be optimally realized simultaneously because of contingent circumstances, for instance, lack of resources, as in the health care example. Other values may conflict with one another non-contingently, like freedom versus equality of opportunity in school education. Cf. Williams, "Conflicts of Values," 71–82; and Williams, "Liberalism and Loss." Other non-contingently or inherently conflicting values are discussed by, amongst others, Nagel, "The Fragmentation of Value," and "Pluralism and Coherence," 106; and Hampshire, *Morality and Conflict*, 38, 155. Some thinkers doubt whether values—properly understood—may inherently conflict; see, for instance, Dworkin, "Do Liberal Values Conflict?" and *Justice for Hedgehogs*.

The structure of this essay is as follows. Sections 2 and 3 explain the meaning of incommensurability and incomplete comparability. They show that the former is not identical to, but an important (although not sufficient) condition of the latter. Section 4 elaborates on a concrete example of incompletely comparable options in ethical decision-making, namely, allocation of scarce health care resources according to need of treatment versus allocation according to benefit from treatment. This serves as a paradigmatic example of many other cases of incompletely comparable options. Section 5 discusses the view of some leading theorists who explain the phenomenon to which incomplete comparability refers as imprecise comparability and imprecise or rough equality.[5] We will see that this explanation is mistaken and conceals the problematic implications of incommensurability of values for practical reasoning. These implications, which are related to the impossibility of relative weight assignment, are discussed in section 6. In section 7 I briefly mention possible solutions to problems of incommensurability but I doubt whether they are appropriate and adequate and whether they can always and completely avoid the need of relative weight assignment.

In this essay I will analyse a number of previously unnoticed or ignored concepts related to incomplete comparability: the large improvement phenomenon (§4.2), the paradox of absent equivalence (4.3), ambivalence (the absence of both preference and indifference) (6.2), rational indeterminability (6.3), incompletely justified choice (6.4) and ethical deficit (6.4, 6.5). These concepts shed a new light on the issue of value-incommensurability. I will conclude that incommensurability may cause significant problems for (a) ethical and justified decision-making concerning conflicting human values; (b) the application of 'indifference curves' in economic, 'utility' or 'preference'-oriented analyses; (c) the impartial integration of competing values in theories and practices to the extent that (a), (b) and (c) depend on the assignment of weights to incommensurable values.

2. Incommensurability

Incommensurability of values can be defined as follows:

> Two values are incommensurable if and only if they have different dimensions that cannot be reduced to one dimension so that their amounts cannot be measured and compared on a common cardinal scale of units of value.[6]

5. See, for instance, Parfit, *Reasons and Persons*, 431; and *On What Matters*, chap. 6, §19; Griffin, *Well-Being*, chap. 6; and Chang, *Making Comparisons Count*, 145.
6. A cardinal scale measures (differences in) amounts of values in quantities of units of value. An ordinal scale, by contrast, is a list of rankings in terms of 'more or less value,' 'more or less importance' or 'higher or lower status,' without indicating how much the amounts

Conversely, commensurability of values can be defined as follows:

> Two values are commensurable if they can be reduced to each other or to a one-dimensional 'super-value,' *V* (for instance, monetary value or hedonistic utility), so that their amounts can be measured and compared on a common scale of units of value (e.g., units of *V*).

Most theorists agree that many values are incommensurable in the above sense but think that incommensurability creates no significant problems for practical reasoning.[7] They point at the many cases in which incommensurability does not pose any problem for comparability of options and rational decision-making. For instance, according to Sen, incommensurability can "hardly be a remarkable discovery" because—although "the distinct dimensions of values may not be reducible into one another"—"there may be no problem whatsoever in deciding what one should sensibly do when our priorities or weights over these values are clear enough."[8] Chang gives several examples and arguments in support of the view that incommensurability does not pose problems for the comparability of options.[9] Stocker too points at the omnipresence of unproblematic incommensurability as an indirect argument against the existence of difficulties for rational decision-making.[10] The next section will show that incommensurability of values is indeed not the same as incomparability of options but an important, although not sufficient, cause of what might be called incomplete comparability.[11]

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of value differ in quantities of units of value. As we will see, incommensurability excludes comparisons on a cardinal scale but not necessarily on an ordinal scale. Chang ("Introduction," 2) reserves the term 'incommensurable' for values that 'cannot be *precisely* measured by some common scale of units of values' (emphasis added). The adverb 'precisely' is confusing because it wrongly suggests that incommensurability concerns (i) imprecise measurability instead of non-measurability on a common cardinal scale, and (ii) imprecise equality instead of absence of any equality (see below).

7. See note 1.
8. Sen, "Incompleteness and Reasoned Choice," 44. Below we shall see that answering the question of the right weights is precisely the central problem of incommensurability.
9. Chang, "Introduction."
10. Stocker, *Plural and Conflicting Values*, 153, 155, 168, 207.
11. I prefer the term 'incomplete comparability' to 'incomparability' because incomparability is seldom or never complete: (a) Although the relevant options are overall incomparable (that is, with respect to the two relevant values taken together), they are usually comparable with respect to the two values separately. (b) The relevant 'incomparability' does not exclude—even presupposes as one of its conditions (see §3.1.1)—the possibility to determine, on an ordinal scale, that neither of the relevant two values is definitely more important than the other.

3. Incomplete Comparability

If *A* and *B* are incomparable, *A* is neither better than, nor worse than, nor equally good as *B*, for the simple reason that, if *A* is better than, worse than, or equally good as *B*, then *A* and *B* are not incomparable. Conversely, if *A* is neither better than, nor worse than, nor equally good as *B*, it may indicate (although it does not logically demonstrate)[12] that *A* and *B* are incomparable. In line with this thought (which I will further underpin below; see §§4.2, 4.3 and 5), incomplete comparability is defined as follows: Two options *A* and *B* are incompletely comparable if—all things considered and impartially[13]—it is

(i) not true that *A* is better than *B*, *and*
(ii) not true that *A* is worse than *B*, *and*
(iii) not true that *A* and *B* are (roughly) equally good.

Call this threefold denial '3NT' (triply-Not-True). The possibility of 3NT is difficult to understand, unless it is explained in terms of incomparability. Indeed, if *A* is not better than *B* and *B* is not better than *A*, it seems necessarily true that *A* and *B* are (roughly) equally good; and if *A* is not (roughly) equally good as *B*, then it seems necessarily true that *A* is better than *B* or *B* is better than *A*—*unless A and B are incomparable*. Still, although many theorists recognize the possibility of '3NT,' they often do not explain it in terms of incomparability.[14] Chang denies that it means incomparability.[15] She interprets 3NT as a fourth value relation within the domain of (complete) comparability, which she calls 'parity' and explains as 'cardinal imprecise equality.'[16] Below

12. Ruth Chang emphatically denies that if *A* is neither better than, nor worse than, nor equally good as *B*, *A* and *B* must be incomparable. See below. Therefore, the thesis and definition of incomparability require a further foundation, which is given below (see especially the end of §5).
13. 'Impartially,' that is, detached from a specific comprehensive belief, personal intuition or subjective preference. The three 'not true' statements which follow must be partly explained in this light: reason as such—that is, reason detached from a specific comprehensive belief, personal intuition or subjective preference—does not show that the relevant value-relation is true. This concerns what might be called 'rational indeterminability': it means that reason as such 'under-determines the choice' (Raz, *The Morality of Freedom*, chap. 13; see also §6.3 of this paper). However, as we will see, with respect to the issues under consideration, it seems plausible that it is not only 'not rationally determinable,' but 'not true at all,' that one of the three value relations ('better than,' 'worse than' or 'equally good as') applies. Whatever may be the case, the implications of 3NT for practical reasoning are the same whether it concerns 'not rationally determinable' or 'not true at all' (compare Levi, *Hard Choices*.
14. In Chang's edited volume, Raz is the only philosopher who explicitly explains 3NT as 'incomparability' (see Raz, "Incommensurability and Agency").
15. Chang, "Introduction," "The Possibility of Parity," and *Making Comparisons Count*.
16. Chang, *Making Comparisons Count*, 145.

I will show that this interpretation is mistaken and conceals important implications for practical reasoning.[17]

3.1. Conditions of Incomplete Comparability

Options that bear incommensurable values may still be comparable.[18] This can be explained by the fact that, in addition to being incommensurable, the relevant values must satisfy two other conditions in order to cause incomplete comparability of options: they must be 'symmetrical' and 'significant.'

3.1.1. Symmetry

Incommensurability implies that the amounts of the relevant values cannot be compared on a common cardinal scale. This does not exclude that the relevant options can be compared on a common ordinal scale—a list of rankings,[19] which do not indicate cardinal differences in amount of value.[20] Suppose, for instance, that the citizens of a society have basic liberties (such as freedom of movement, speech and religion) and sufficient economic welfare. The citizens of another society have more economic welfare but lack basic liberties. Incommensurability of the values 'economic welfare' and 'basic liberty' does not prevent the comparability of the two societies: the former can be ranked higher than the latter if it is true that basic liberties are definitely more important than increased welfare above a level that is already sufficient. This comparative

17. Elsewhere I have challenged Chang's view in more detail; see Martijn Boot, "Parity, Incomparability and Rationally Justified Choice." Also, Parfit, who inspired Chang, interprets 3NT as imprecise equality (Parfit, *Reasons and Persons*, 431).
18. 'Incommensurable' applies to values, while 'incompletely comparable' applies to options. Incommensurability of values may, and may not, cause incomplete comparability of options. It is worth noting that incommensurability of two values always prevents relative weight assignment in the sense that we cannot say how many times a particular amount of one value is more valuable than a particular amount of the other value, because of the absence of any equivalence relation between two incommensurable values: neither amount of one value is (roughly) equivalent to any amount of the other value (see §4.3). However, incommensurability does not always imply incomparability because comparisons can sometimes be made in the absence of an equivalence relation and without the assignment of relative weights; see below.
19. Rankings in terms of 'higher or lower status' or 'more or less important.' Cf. Elizabeth Anderson, "Practical Reason and Incommensurable Goods" in Chang (ed.), *Incommensurability, Incomparability, and Practical Reason*, pp. 90–109.
20. Steven Lukes ("Comparing the Incomparable," 281n14) argues that "To the extent that it is claimed that *X* is better than *Y*, there is some answer, however imprecise, to the question 'how much better?'" Chang ("Introduction," 18-19) rightly disagrees: "[A]n answer to Lukes's quantitative question 'How much better?' is not required by comparison. . . . Comparability does not require that comparison be a matter of quantities of value, let alone quantities of some unit of value. To think that comparability requires a single quantitative unit of value according to which items can be measured is to mistake commensurability for comparability."

ranking is possible despite the fact that the amounts of the relevant values cannot be measured and compared on a common cardinal scale. In other words, if two values are incommensurable but 'not symmetrical' (that is, if one value has a higher ranking on an ordinal scale than the other) comparability of options is maintained.[21] Thus, another condition of incomplete comparability is that the relevant competing values, apart from being incommensurable, are symmetrical in the sense that neither is definitely more important than the other.

3.1.2. Significance

Suppose option *A* contains a significantly larger amount of one value than option *B*, while option *B* contains a trivially larger amount of another incommensurable value than option *A*. In that case, incommensurability and symmetry are no problems for the comparability of the options, because, other things being equal, *A* is better than *B*. For instance, if citizens of society *A* have much more liberty than citizens of society *B*, while the latter have only trivially more equality, then, other things being equal, *A* is better than *B*.[22] This conclusion is the result of a comparison, which is not prevented by the fact that the values 'liberty' and 'equality' are incommensurable and symmetrical. Thus, in addition to incommensurability and symmetry, a third condition of incomplete comparability is that the differences in amounts of values are 'significant.'[23]

4. Examples of Incomplete Comparability

We have seen that if the relevant values do not satisfy one or more of the conditions of incomplete comparability ('incommensurability,' 'symmetry' and

21. Sometimes also options that bear *asymmetrical* incommensurable values may be incompletely comparable, namely, if the amount of the more important value is small and the amount of the less important value is large, and if, in addition, the former value has no lexical priority to the latter. (Lexical ranking of one value above another means that the former—however *small* its amount—is always more important than the latter—however *large* its amount.) Reversely, sometimes also options that bear *symmetrical* incommensurable values may be *comparable*, namely if the 'significance' condition is not satisfied (see the next section, 3.1.2).
22. I owe this example to Williams (*Moral Luck*, 77).
23. Of course, 'significance' is a rather vague and subjective notion. I use it in the sense that the difference in amounts of the relevant value cannot be ignored. There is still another point that is worth to mention. One could argue that if the amount of one of the values is not insignificant in itself but 'pales into insignificance' compared to a very large amount of the rival value, the options may be comparable as well, as we will assume below where we will discuss the so-called standard-configuration (§4.2). If so, an additional condition of incomplete comparability is what might be called the '*relative* significance condition': in addition to being significant in themselves, amounts of the competing values must be significant in relation to each other.

'significance') the options are completely comparable. However, this does not yet demonstrate that, if the values do satisfy these conditions, the options are incompletely comparable.[24] In the next sections (4.1–4.3) we will analyze in detail a concrete example of two options which embody rival values that are incommensurable, symmetrical and significant, in order to see whether this implies that they are incompletely comparable in the defined sense. It concerns two rival policies with respect to allocating scarce health care resources. In section 4.4 I will argue that this example may serve as a paradigmatic model for showing incomplete comparability of all other options that bear values which similarly satisfy the conditions incommensurability, symmetry and significance.

4.1. Need versus Benefit

Suppose a budget is made available for a newly developed and expensive treatment of patients suffering from a particular disease. The disease has two forms, a serious and less serious one. There are 1000 patients: 500 suffer from the serious form and 500 from the less serious one. The available budget is sufficient for the treatment of 500 patients, so that a selection has to be made. Patients who suffer from the serious form are in larger need of treatment but have less health benefit from it (1 QALY added) than patients who suffer from the less serious form (2 QALYs added).[25] There are no other differences between the two groups which are relevant to selection of patients for treatment. The question becomes then as follows. What is the right policy: allocation of the resources to the 500 worst-off patients (policy *A*) or to the 500 patients who are less seriously ill but will have a significantly larger benefit from treatment (policy *B*)?[26]

24. One might raise the following objection. How can we maintain that two options are incompletely comparable if we are able to conclude that neither of the values borne by the options is more important than the other? Indeed, the conclusion 'not less important' is the result of an (ordinal) *comparison*. However, if the value that is borne by one option is not less important than the value that is borne by the other, this does not necessarily mean that the options are equally good, not even roughly equally good. This is discussed above and demonstrated below. If the relevant options appear to be not equally good, while neither is better than the other, they are incompletely comparable. Unawareness of the distinction between symmetrical values and equally good options has confused several thinkers; see, for instance, Stocker, "Abstract and Concrete Value," 203; Veel, "Incommensurability, Proportionality and Rational Legal Decision-Making." Veel indirectly conflates 'equal standing' with 'equivalence.'
25. QALY = quality adjusted life years. QALY combines length of life and quality of life. 'QALY added' is a measure of health benefit added by medical treatment.
26. There are several other concrete examples of conflicts between need of treatment and benefit from treatment or between 'equity' and 'efficiency' as selection criterion for treatment; see, for instance, Brock, "Ethical Issues in the Use of Cost Effectiveness Analysis for the Prioritisation of Health Care Resources."

This question is difficult to answer because of the heterogeneity of the competing values (priority to the worst-off versus maximization of health benefit).[27] This example may be an instance of incompletely comparable options because the competing values satisfy the conditions incommensurability, symmetry and significance. In the next section I will discuss what might be called the 'large improvement phenomenon' to make it plausible that policy *A* and *B* are indeed incompletely comparable.

4.2. The 'Large Improvement Phenomenon'

As far as I know, the large improvement phenomenon and its implications for practical reasoning have never been noticed or explicitly described.[28] It forms the basis for the idea of incomplete comparability. A variation of John Broome's so-called 'standard-configuration' may help to clarify it.[29] A 'standard option' *A* is compared with a chain of options *B* that gradually improve. Option *A* bears particular amounts of two incommensurable values, v_1 and v_2. Options *B* bear a smaller amount of value v_1 and a larger amount of value v_2 than option *A*. In options *B* the amount of v_1 is fixed while the amount of v_2 increases upwardly.

Let us apply this standard configuration to the health care example. Policy *A* is 'standard option' *A*, which is compared with a chain of policies *B*. As discussed above, policy *A* has more concern for the worst-off patients (v_1) while policy *B* yields more health benefit (v_2). The larger health benefit produced by policy *B* further increases upwardly along the chain. Let us assume that the policies *B* in the lower part of the chain are worse than the standard, because here the health benefit is only trivially larger than that of policy *A* while it has no extra concern for the worst-off. Let us further assume that in the upper part of the chain policies *B* produce vastly more health benefit than *A*, while they are significantly inferior with respect to concern for the worst-off. Whatever may be the case with respect to these policies in the upper part of the chain (it is questionable whether these policies *B* are unambiguously better overall), it is uncontroversial to assume that between the upper and lower part of the chain there is a zone in which it is unclear whether *B* is better or worse than *A*. In this zone, let us consider a policy B_1 that yields a significantly larger total health benefit than policy *A* (1000 versus 500 QALYs). *A* is superior with respect to

27. This example is analogous to the one discussed by John Rawls (*A Theory of Justice*, 32–33): the aggregative-distributive dichotomy concerning maximization of welfare versus fair distribution of welfare.
28. This phenomenon shows some superficial similarities with, but is fundamentally different from, the more familiar 'small improvement phenomenon,' which is accepted by several theorists and is adduced to demonstrate imprecise equality.
29. John Broome, "Is Incommensurability Vagueness?"

concern for the worst-off patients, while B_1 is superior with respect to health benefit. Which policy is overall superior? It seems justified to conclude that B_1 is neither better nor worse than A.[30] If so, this seems to mean that both policies are (roughly) equally good. But this need not be the case. Take a considerably improved policy B_2, which yields a much larger total health benefit than policy B_1: 2000 instead of 1000 QALYs.

Other things being equal, B_2 is considerably better than B_1. However, it is plausible that B_2 is again *not* better than A. If this is true, then B_1 is not equally good—not even roughly equally good—as A. Indeed, if B_1 were (roughly) equally good as A, B_2 would be not only considerably better than B_1, but also considerably better than A. But this is not the case.[31] I call this the 'large improvement phenomenon.' In the relevant range, health benefit considerably increases, without making distribution B better[32] than distribution A. If this is correct, it means that over a *large* range of increasing value v_2 (health benefit) the relation between A and B is an instance of 'incomplete comparability' in the defined sense: A is neither better than, nor worse than, nor equally good—not even roughly equally good—as B. We might call this large range the 'range of rational indeterminability.'[33] In this range reason does not unambiguously show which option should be chosen all things considered because an (impartial and determinate) comparative worth of the relevant options does not exist.

People who disagree with the 'large improvement argument' must assume the existence of a (rough) level of equivalence between the fundamental heterogeneous values 'concern for the worst-off' ('equity') and 'efficiency.' This would mean that the (amount of) value of giving priority to the worst-off patients represented by policy A is equivalent to a particular amount of health benefit: for instance, the treatment of one seriously ill patient, which yields a health benefit of, say, 1 QALY, is overall equivalent to the treatment of one less seriously ill patient, which yields a health benefit of, say, 4 QALYs (relative weight of 'equity' versus 'efficiency' is then 4). Given the fundamental heterogeneity and incommensurability of these values, the existence of such a determinate level of equivalence seems not very plausible (we might call this

30. Or: neither determinately better nor determinately worse. See note 10 above.
31. In a similar context Raz (*The Morality of Freedom*, 325) speaks of the 'failure of transitivity.'
32. At least not better from an impartial perspective, determinable by reason as such; see note 10.
33. Unlike 'inconclusiveness,' 'indeterminability' does not mean that we do not (yet) know the comparative worth of the options, due to the complexity of the issue and insufficient knowledge. Instead, it means that, even in principle, such a comparative worth cannot be determined because it does not exist, due to incomplete comparability of the options. Although 'indeterminability' is not mentioned in the *Oxford English Dictionary*, this term is better than 'indeterminacy' because the latter is often identified with 'vagueness' or 'impreciseness,' which is a different phenomenon.

the 'incommensurability argument').[34] If so, it is plausible that there is a wide range of rational indeterminability in which the assignment of determinate and impartial relative weights is impossible given the absence of any level of (rough) equivalence.

In addition to the 'large improvement argument' and the 'incommensurability argument,' there are still two other arguments that support the view that, in the relevant cases, a (rough) equivalence relation does not exist. I will successively adduce these arguments.

In Erik Nord's empirical study, by which the above example is inspired, different rational, well-informed people and medical professionals were asked how much treatment efficiency (aggregated benefit from treatment) they would be prepared to sacrifice in order to give (some or complete) priority to the worst-off. The answers made it possible to deduce the relative weights they assigned to equity (concern for the worst-off) compared to efficiency (aggregate benefit from treatment). The respondents assigned considerably divergent relative weights to these competing values: the relative weights varied by a multiplicative factor of 70! Dan Brock, who refers to Nord's research and to similar studies, draws the following conclusion:

> Most people and many theories of distributive justice have a concern both for maximising overall benefits with scarce health care resources *and* for helping the worst off or sickest, but there is a *large* range of indeterminacy

34. Cf. Ross (*The Right and the Good*, 154), who similarly argues that it is unintelligible how any amount of a particular value could be equal in value to any amount of a fundamentally different, incommensurable value. Aristotle (*Ethics*, p. 185) succinctly summarizes the problem: "Without commensurability, no equality." Only strict trichotomists (thinkers who believe that there are three, and not more than three positive value relations: better, worse and precisely equally good) assume the existence of a level of equivalence between heterogeneous values. In Chang, *Incommensurability, Incomparability and Practical Reason*, only one of the thirteen contributors, Donald Regan ("Value, Comparability, and Choice"), adheres to the trichotomy thesis. It is true that, although the other twelve contributors do not believe in the existence of a *precise* level of equivalence, this does not yet mean that they do not believe in *rough* equivalence either. However, Ruth Chang and Derek Parfit (*On What Matters*), two leading philosophers in the relevant field, recognize that what they call 'impreciseness' may be 'very large,' which entails the absence of even rough equality and the presence of the large improvement phenomenon. One might argue that reducing disparate values to a common measure, for instance, 'intrinsic value'—as proposed by Fred Feldman ("Adjusting Utility for Justice")—could resolve the relevant problem because it could assume the existence of equivalence in intrinsic value. However, this approach is equally susceptible to the claims made in the present essay, because it does not resolve the problem of measuring and comparing amounts of conflicting incommensurable values if we cannot make use of a single one-dimensional cardinal scale. Unlike the common measure 'pleasure' of classical utilitarianism, the common measure 'intrinsic value' is complex and multifaceted instead of simple and one-dimensional. This creates a problem if the relevant disparate values clash as in the examples mentioned in this essay.

> regarding the proper tradeoff between these two concerns when they are in conflict.[35]

The considerably divergent relative weights and the connected 'large range of indeterminacy' are in line with the large improvement phenomenon. They are difficult to explain in terms of 'the *small* improvement phenomenon' and 'unavoidable imprecision.' The same applies to other examples, for instance, the empirical study (similar to Nord's research) by Daniels and Sabin in which medical students applied considerably different relative weights to conflicting values related to the distribution of scarce health care resources.[36] We might call this line of reasoning (pointing at the empirical fact that equally rational and well-informed persons assign considerably different relative weights to the relevant heterogeneous and incommensurable values) the 'empirical argument.'[37] Joseph Raz would give the following explanation.[38] In the relevant cases reason 'under-determines' the choice. In other words, within the range of different relative weights (assigned by equally rational and well-informed persons) reason does not show that there is a (single) right relative weight (still less what the right relative weight could be). People who deny this, must assume that there is a (determinate and single) right relative weight between the relevant disparate values and that all rational and well-informed people who assign another relative weight are simply wrong. This seems not very plausible. We might call this argument (against the existence of a [determinate and single] right relative weight between incommensurable values) the 'argument from rational under-determination.'

In sum, there are four interrelated arguments that support the existence of a 3NT value relation (including the absence of a [rough] equivalence relation): the large improvement argument, the incommensurability argument, the empirical argument and the argument from rational under-determination. Neither argument conclusively demonstrates the non-existence of a rough equivalence relation between the relevant values, but taken together they seem to make it plausible.

35. Brock, "Ethical Issues."
36. Daniels and Sabin, "Limits to Health Care."
37. Cf. also Rawls (*A Theory of Justice*, 34) about weighing the two competing values of the 'aggregative-distributive dichotomy'—efficiency versus equity—in the distribution of welfare: "[V]ery different weightings are consistent with these principles." Interpersonal differences in the assignment of weights and disagreement about the right weights are, of course, not a demonstration of the absence of an impartially or objectively right answer, but, conversely, if it is true that such an answer does not exist or that reason under-determines the answer, it is obvious that rational disagreement about the right answer easily occurs.
38. Raz, *Morality of Freedom.*

4.3. The Paradox of Absent Equivalence

It is worth emphasizing that in Broome's standard configuration there is a range where *B* is worse and a range where it is questionable that *B* is better than *A* overall, but nowhere is there a level or range where *A* and *B* are (roughly) equally good. In other words: starting from the bottom part of the chain and gradually increasing the value of *B*, *B* changes from being worse than A to being better than A, *without passing a level or range where A and B are equally good—not even roughly equally good*! This surprising phenomenon might be called the 'Paradox of Absent Equivalence.'[39] As far as I know, this paradox and its problematic implications for the rational assignment of relative weights have never been explicitly noticed and analysed. One of the causes of this gap is that, as we will discuss in section 5, some leading theorists explain the absence of equivalence in terms of 'imprecise equality.' This notion conceals rather than reveals what is the case: the absence of any, even imprecise, equality.

4.4. Other Examples

Most theorists agree that many values are incommensurable. But, as we have seen, incommensurability is not sufficient to make options incompletely comparable: the relevant values must also satisfy the conditions 'symmetry' and 'significance.' Therefore, incomplete comparability is less pervasive than incommensurability. Still many human values are not only incommensurable but also symmetrical and significant in the defined senses. Because incomplete comparability depends on the presence of the above conditions rather than on the specific nature of the relevant values, many other examples of incompletely comparable options in public decision-making, ethics and justice can be added to the discussed paradigmatic example.[40]

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39. The enigma is resolved if one understands the underlying causes. If options are incomparable (or incompletely comparable) it is intelligible that a level of (even rough) equivalence is lacking. Indeed, as discussed in the beginning of §3, if two options are incomparable, 3NT necessarily applies, including that these options cannot be equally or roughly equally good for the simple reason that we cannot conclude that they are (roughly) equally good if they are incomparable. This partly resolves the enigma. It does not resolve it entirely, because we assume that the two relevant options are *comparable* if the amount of one of the competing values is very small (in the bottom part of the standard configuration) or very large (in the upper part of the standard configuration). How can these options become *incomparable* if the amount of the relevant value is *not* very small or *not* very large? The explanation is that in that case the conditions of incomplete comparability are satisfied, while these are not satisfied in the bottom and upper range of the standard configuration (see, for these conditions, §§3.1.1 and 3.1.2 and footnote 18).
40. See the examples mentioned in the introduction and in section 6.5 (*Implications for justice*) below. The standard configuration can be applied to all relevant competing options and val-

5. Imprecise Equality

Several theorists recognize the existence of a small, rather than large, improvement phenomenon.[41] James Griffin rightly argues that a small improvement phenomenon is no demonstration of incomparability: "[a small improvement phenomenon] would show that two items were not precisely equal. But it does not show that they are not roughly equal, and rough equality is a form of comparability."[42] Chang calls options to which the small improvement applies 'on a par.' As said above, she regards parity as 'cardinal imprecise equality'[43] and as a fourth value relation within the domain of (complete) comparability.[44] Also Parfit explains 3NT as imprecise equality.[45] However, in this paper we are considering examples to which a large, rather than small, improvement phenomenon applies. Parfit and Chang maintain that these examples, too, concern 'imprecise equality.' Parfit distinguishes degrees of imprecise equality and occasionally uses the notion 'very imprecise equality,' for instance,

ues (e.g., more personal privacy versus more public security; or, more equal distribution of welfare versus more aggregate welfare). For instance, option *A* may represent a particular amount of personal privacy which is compared with a chain of options *B* that represent less personal privacy but increasingly more public security. For many other examples, see Boot, *Incommensurability and its Implications for Practical Reasoning, Ethics and Justice* (forthcoming from Rowman and Littlefield International).

41. Chang, *Making Comparisons Count*, and "Introduction"; Griffin, "Incommensurability"; Parfit, *Reasons and Persons*, 430–31.
42. Griffin, "Incommensurability," 262n12.
43. Chang, *Making Comparisons Count*, 145.
44. Hsieh ("Equality, Clumpiness and Incomparability") argues that there is no reason to speak of a fourth value relation. He makes a distinction between rough equality and incommensurability/incomparability. He defends the thesis that if two items can be compared with respect to a covering value, and neither is better than the other, then the items are equally good. Hsieh states that if there is a covering value with respect to which two items can be compared, they are commensurable and comparable. This is based on a misunderstanding of the relation between covering value and incommensurability. It is not true that a covering value means comparability (see also Chang, "Introduction"), still less commensurability. Many covering values are multifaceted and consist of more than one contributory value. These values may be incommensurable. Suppose one item is better with respect to one contributory value, and the other item is better with respect to another contributory value, while these contributory values are incommensurable. Then it is quite well possible that these items are incompletely comparable (namely, if all conditions for incomplete comparability are satisfied) despite the presence of a covering value. My view also differs from Hsieh's view about the relation between incommensurability and incomparability. Following Raz, Hsieh argues that incommensurability entails incomparability. However, incommensurability does not always entail incomparability (namely if not all conditions of incomplete comparability are satisfied; see §§3.1.1 and 3.1.2). As I argue, incommensurability is the central, but not a sufficient, condition of incomplete comparability.
45. Parfit, *Reasons and Persons*, 431.

in his discussion of Sidgwick's 'dualism.'[46] Sidgwick believes that impartial reasons for action are incomparable with self-interested ones. Parfit disagrees and explains why. Suppose we have to compare and choose between "saving ourselves from one minute of discomfort" and "saving a million people from death or agony." The latter option is definitely better than the former. If so, there is comparability between self-interested and impartial reasons. Parfit admits that Sidgwick's view is nevertheless partly right because the comparability of self-interested and impartial reasons may be 'very imprecise.' To show this, he gives the following example.

> I could save either my own life or the lives of several distant strangers. . . . And I might have such reasons whether the number of these strangers would be two or two thousand. . . . If these claims are true, the relative strength of these two kinds of reason is very imprecise.[47]

Parfit regards the two options as 'imprecisely equally good.' He recognizes that in this example 'the impreciseness is very large.' If we can rationally choose between saving 2 strangers (*A*) and saving my own life (*B*), then—assuming that it would be irrational to choose the worse option—neither option is worse than the other. If we considerably improve *A* by a factor of 1000 (saving 2000 strangers instead of 2) and we can again rationally choose *B*, then *B* is apparently again not worse than *A*. If so, this means that the original (non-improved) *A* is not only not better and not worse than *B*, but also not equally good, not even imprecisely equally good, as *B* (given the large improvement phenomenon). Nevertheless Parfit believes that *A* and *B* are (imprecisely) *comparable* and (imprecisely) *equal*. However, if non-improved *A* is not definitely worse than *B* and a 1000-fold improvement of *A* makes it not better than *B*, an explanation of the relation between *A* and *B* in terms of 'imprecise equality' seems impossible. Indeed, how can we reconcile the large improvement phenomenon with the existence of equivalence, including rough equivalence? If *A* and *B* would have (roughly) equal amounts of (overall) value, then a considerable (manifold) increase in *B*'s amount of value would imply that *B*'s amount of value becomes considerably larger than *A*'s amount of value. There is a more comprehensible and plausible explanation for the relevant 'large improvement phenomenon': *A* and *B* are incompletely comparable (instead of imprecisely comparable) and lack any equivalence (instead of being imprecisely equal).[48]

46. Parfit, *On What Matters*, chap. 6, §19.
47. Ibid. 138.
48. There are cases in which 'imprecise equality' and 'imprecise comparability' are appropriate denotations, namely, if they refer to the imprecise measurability of the amounts of the relevant values. Imprecise measurability applies to most human values, because we do not have equipment for exactly measuring their amounts. Parfit gives the following example of 'real imprecise equality': "Must it be true, of Proust and Keats, either that one was the greater writer, or that both were *exactly equally* as great? There could not be, even in prin-

The latter (the lack of any equivalence) supports the former (the idea that it concerns a kind of incomparability). This is in line with the explanation of 'incomparable' given by the *Oxford English Dictionary*: 'without an equal in quality or extent.'[49]

In sum, I reserve the notion 'rough equality' for items to which the small improvement but not the large improvement phenomenon applies. These are items that are compared with respect to values the amounts of which are not precisely measurable. Imprecise equality is caused by the vagueness of the relevant human values and the imprecise measurability of their amounts, so that even if we compare two items with respect to a single value, the small improvement phenomenon will apply if this value is vague and its amounts are imprecisely measurable. Incomplete comparability, by contrast, does not depend on vagueness and imprecise measurability of amounts of values. If the relevant values are clear instead of vague and if their amounts are precisely instead of imprecisely measurable, the large improvement phenomenon still applies, because it depends on the incommensurability of the values rather than on imprecise measurability of their amounts. The small improvement phenomenon is no proof of incomparability. It is a sign of rough instead of precise equality; and rough equality is a form of comparability.[50] The difference between vagueness and rough equality on the one hand and incomplete comparability on the other can be summarized as follows:

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ciple, such precision" (*Reasons and Persons*, 431). The cause of this imprecision is clear: the amounts of the value with respect to which we want to compare Proust and Keats—say, literary talent—are not precisely measurable and not precisely comparable (partly because of the different genres of Proust's and Keats's literature). Therefore, if Proust and Keats do not clearly differ in literary talent, this means that they are imprecisely equally good, in which case a small rather than large improvement phenomenon applies. Parfit's notion 'imprecise equality' (and Chang's notion 'parity') conflates two distinct phenomena: one is 'real imprecise equality,' the other 'incomplete comparability.' Because incomplete comparability is a gradual phenomenon, there are cases of incomplete comparability that resemble cases of imprecise equality (see Boot, "Parity, Incomparability and Rationally Justified Choice," and *Incommensurability of Values and Implications for Justice*).

49. Chang and Parfit may still hold on to the notion 'very imprecise equality' where I use the notion 'incomplete comparability.' However, this does not refute the fact that in the relevant cases the large improvement phenomenon applies (as Parfit and Chang recognize), and this is sufficient for my argument. The problems of incommensurability described in this article are the result of the existence of a 3NT-relation between the relevant options. The main argument for 3NT is the large improvement phenomenon, regardless of how 3NT and the large improvement phenomenon might be explained: in terms of 'imprecise equality' or 'incomplete comparability.' That is the reason why Chang's and Parfit's 'imprecise equality' is no real threat for the claims made in this article. For a more detailed explanation, see Boot, "Parity, Incomparability and Rationally Justified Choice."

50. Griffin, "Incommensurability," 262n12.

—Without bidirectionality and incommensurability of the relevant values there can be 'vagueness' and 'rough equality' but not 'incomplete comparability.'

—Without imprecise measurability of the amounts of the relevant values there can be 'incomplete comparability' but not 'vagueness' and 'rough equality.'

'Vagueness' concerns imprecise measurability. It underlies 'imprecise equality.' 'Incomplete comparability' concerns neither impreciseness nor equality. Not imprecise measurability but incommensurability of the relevant values underlies 'incomplete comparability.' Imprecise equality is an imprecise version of equality—one of the three current value relations, within the domain of (complete) comparability. Incomplete comparability, by contrast, concerns neither impreciseness nor equality. Unlike imprecise equality, incomplete comparability may cause significant problems for the rational justification of the choice, and is incompatible with determinate trade-offs, because any equivalence, even rough equivalence, is lacking.

6. Implications

6.1. Impossibility of Assigning Relative Weights

Many theorists regard relative weight assignment as *the* solution to conflicts of values, rival human interests and rival demands of justice.[51] For instance, with respect to two competing ways of allocation of scarce health care resources Kamm argues that the right decision depends on the relative weight to be assigned to the relevant values.[52] Kamm does not explain how the required weights can be assigned. In an empirical study about the issue under consideration, to which I already referred, equally rational and well-informed people intuitively and subjectively assigned considerably different relative weights to the relevant values (e.g., concern for worst-off patients and benefit from treatment): they varied by a multiplicative factor of 70.[53] This is not surprising because, as discussed above, rationally determinable and impartial relative weights do not exist if the relevant options are incompletely comparable.

51. See, amongst others, Farrelly, "Justice in Ideal Theory"; Goodin, "Political Ideals and Political Practice"; Robeyns, "Ideal Theory in Theory and Practice"; Sen, "Incompleteness and Reasoned Choice"; Swift, "The Value of Philosophy in Nonideal Circumstances"; and Mason, "Just Constraints."
52. Kamm, "Deciding Whom to Help."
53. Nord, "The Trade-Off Between Severity of Illness and Treatment Effect in Cost-Value Analysis of Health Care."

As mentioned above, Sen thinks that incommensurability is "no problem whatsoever in deciding what one should sensibly do when our priorities or weights over values are clear enough."[54] However, if the relevant options are incompletely comparable, the problem is precisely that it is not clear what the priorities or weights should be. Still many theorists maintain that the solution should be found in the assignment of weights, but, like Kamm, they do not indicate how.[55] Cohen has commented on this omission as follows: "[P]hilosophers . . . do not know how to compute, in general terms, the comparative weights of the values all of which deserve consideration."[56] And:

> Philosophers sometimes end their articles by saying this sort of thing: "It is a task for future work to determine the weight of the consideration that I have exposed." But nobody ever gets around to that further work. They wish they could, but they can't. . . . Nobody knows how to balance different values against one another.

6.2. Absence of Both Preference and Indifference

The existence of incomplete comparability refutes the widespread belief that if neither of two options is better than the other, they are (roughly) equally good, and that if neither option is preferred to the other, the agent is indifferent between them. The value-relations 'better than,' 'worse than' and '(roughly) equally good as' are not exhaustive: the relevant relation may also be an instance of 3NT or incomplete comparability. As a consequence, 'preference' and 'indifference' are not exhaustive attitudes towards valuable options; and absence of preference does not necessarily mean indifference. If options are incompletely comparable, there is neither preference nor indifference, but ambivalence. This is incompatible with the possibility to construct 'indifference curves' with respect to the relevant options.[57] Especially with respect to the important human values under consideration, personal preferences too may be incomplete.[58] If two values are incommensurable, individuals may be incapable of indicating what amount of one value is (roughly) equivalent to what amount of the other value. If they nevertheless make a choice, their decision need not reveal a preference. In cases of incomplete comparability "[r]evealed prefer-

54. Sen, "Incompleteness and Reasoned Choice," 44.
55. See the references in note 51.
56. Cohen, "Rescuing Conservatism."
57. Sen, "Incompleteness and Reasoned Choice," 59n30; Broome, *Weighing Goods*, 93; Chang, "The Possibility of Parity," 666; Cohen, *Rescuing Justice and Equality*; Sunstein, *Free Markets and Social Justice*, 75.
58. Compare Morton, *Disasters and Dilemma*, especially chap. 3; Williams, *Moral Luck*, 72–73; Hurley, *Natural Reasons*, 226–30. They argue that intra-personal ambivalence is analogous to inter-personal disagreement.

ences are a very incomplete and misleading clue to people's valuations."[59] 'Revealed preferences' conceal, rather than reveal, that, in cases of incompletely comparable options, the relevant agent may have no preference while she is not indifferent either. Because incomplete preferences are incompatible with indifference curves, it is clear that incomplete comparability has far-reaching consequences for economic, utilitarian and other analyses that depend on the assumption that agents either have a preference or are indifferent.

6.3. Indeterminability Instead of Inconclusiveness

Ronald Dworkin rejects the idea of indeterminability because it means that in the relevant case there is no determinately right answer, which, according to him, is highly implausible. He argues as follows:

> We claim not just that there is . . . no decisive reason to take one side or the other, and may never have one, but that, no matter how hard we look and think, we will not find any consideration or argument that would make the case on one side even marginally stronger than the case on the other.[60]

Dworkin rightly argues that persistent controversy is no convincing reason to suppose that right choices among conflicting values are impossible. Instead of indeterminable the answer to the relevant question may be inconclusive. As Gaus writes, it is by complexity that inconclusiveness arises: "As the complexity of the issue and the number of relevant variables increase, so does disagreement."[61] Dworkin argues that if we continue our research we may find a (single) right answer.[62] He is especially concerned with legal and judicial questions. He believes that at least for an ideal judge "of superhuman intellectual power," whom he calls Hercules, there is a correct answer to every legal question. Dworkin recognizes the theoretical possibility of a 'tie' judgment: the judgment that neither of the claims is stronger than the other.

> We may conceive of a hard case as presenting, for each judge, a scale of confidence running from a left-hand point at which the judge is confident that the proposition favoring one claim is true, but progressively less confident, to a right-hand side with points representing progressively more confidence that the rival claim is true. Then the tie point is the *single point* at the centre of this scale.[63]

According to Dworkin the probability of such a tie is very small: "[G]iven the complexity of the legal materials at hand, judges will, if they think long and

59. Raz, *The Morality of Freedom*, 325.
60. Dworkin, "Indeterminacy in Law," 399.
61. Gaus, *Justificatory Liberalism*, 156.
62. Dworkin, *Taking Rights Seriously*, 105, 279–90; *A Matter of Principle*, 119–45; *Law's Empire*, 239ff.; *Justice for Hedgehogs*.
63. Dworkin, *Taking Rights Seriously*, 286; emphasis added.

hard enough, come to think that one side or the other has, all-things-considered and marginally, the better of the case." Dworkin continues that

> the philosopher . . . would have to produce arguments affirmatively establishing that all hard cases will lie *at the exact centre of the scale* we imagined, and that claim is so implausible that it can be set aside at once.[64]

In this reasoning Dworkin supposes that the scale contains a *single point* ("the exact centre of the scale"), which represents the equal strength of two rival claims (or the equal goodness or weight of two options). If he is right, this entails, of course, that, starting from this point, a marginal improvement of one of both sides is sufficient to tip the scale. And because it is highly improbable that a particular case, even a hard case, "lies at the exact centre of the scale," it will be virtually always true that one claim is stronger than the other.

However, Dworkin overlooks the possibility of the value-relation '3NT' which entails a large range of indeterminability. The relevant hard cases concern incommensurable values. This means the absence of a single point of equivalence. If the large improvement phenomenon is true, it implies that, in the relevant cases, Dworkin's single point does not exist: instead of a point there is a wide range where the scale does not tip. In the relevant case a 'tie judgment' is related to a wide range instead of a single point. In that case, a marginal, and even a large, improvement does not tip the scale, contrary to what Dworkin supposes. It is clear that this makes the impartial resolution to the relevant legal conflicts problematic if not impossible, also for Hercules.

Dworkin warns that philosophers who defend indeterminability must not "fall into the fallacy of supposing that indeterminacy holds by default."[65] Instead, philosophers should give positive affirmative arguments for the "implausible claim" that "all hard cases lie *at the exact centre of the scale*." I think the present essay gives positive rather than default arguments, not for the latter claim but for the implausibility of the very existence of an "exact centre of the scale"—that is, for the implausibility of the very existence of a determinate level of (rough) equivalence between competing incommensurable values on the two sides of the scale. Besides, the "argument from complexity"—the argument that the answers to the relevant questions are not indeterminable but inconclusive because of the complexity of the issue and the great "number of variables" involved—is refuted by the fact that the decision problem does not decrease in uncomplicated thought experiments with only two variables in which the *ceteris paribus* clause is applied, as in the example of allocating scarce health care resources. This example shows that the existence of a single

64. Ibid. 287; emphasis added.

65. The default judgment runs as follows: "When, after careful study, no persuasive argument can be found for either side of some moral or . . . legal question, it is sensible to suppose that there is no right answer to that question" (Dworkin, *Justice for Hedgehogs*, 90ff.).

point of equivalence between two incommensurable values is highly implausible.

6.4. Incompletely Justified Choice

Incomplete comparability does not exclude a choice that is partially justified or rationally permissible. If two valuable options are incompletely comparable, neither is worse than the other. A choice for one of the alternatives is rationally permissible or partially rationally justified because it is *not worse* than the other one. This is in line with Raz's justification of the choice and with Amartya Sen's account of maximization instead of optimization as an account of justified choice: Although reason under-determines the choice, the ultimate choice concerns an option that is rationally eligible because the reasons for choosing this option are not worse than, or outweighed by, the reasons for the rival option(s).[66]

However, one of the aims of the paper is to show that, in the relevant cases of incomplete comparability, there is no justification for choosing one option *rather than* the other. While this *incomplete* or *partial* justification is not a problem in many non-ethical and personal decisions (where it is often sufficient that the chosen option is *not worse* than the alternatives), it becomes a possible problem in public decisions, ethics and justice that concern vital human interests, values or competing and conflicting ethical principles. In those cases we seem to need a stronger (that is, complete instead of partial) justification of the choice than the fact that the chosen option is not worse than the non-chosen one, because this is not a justification for choosing the chosen option *rather than* the non-chosen option. Indeed, the non-chosen option too is not worse than, and not outweighed by, the chosen option.

Incomplete comparability implies that sometimes public and ethical decisions concerning conflicting human interests or values can be taken only on the basis of incomplete or partial justification.[67] The claim that a partial justification "is at least a justification" does not resolve the predicament, because it means that we cannot give a justifying reason for choosing one alternative *rather than* the other. The reasons for choosing one option are not stronger than, and do not defeat, the reasons that could be given for choosing the alternative. This is especially problematic if it concerns public decisions between important but incompatible human interests, or choices between competing moral claims or principles of justice. Particularly in those cases it is important to avoid arbitrariness, personal preferences and partiality. Nagel summarizes this problem as follows:

66. Cf. Raz, *The Morality of Freedom*; Hsieh, "Is Incomparability a Problem for Anyone?"
67. Cf. Sen, *On Ethics and Economics*, 67.

> [When each of two decisions] seems right for reasons that appear decisive and sufficient, arbitrariness means the lack of reasons where reasons are needed, since either choice will mean acting against some reasons without being able to claim that they are *outweighed*.[68]

In other words, incomplete comparability of options that embody competing human interests, values, ethical principles or demands of justice may lead to incomplete rational and ethical justification of the final choice, because the reasons for the chosen option do not outweigh the reasons for the non-chosen one. This causes an *ethical deficit* "since either choice will mean acting against some reasons without being able to claim that they are outweighed." The decision to honor one of the valid ethical or prudential claims rather than the other is arbitrary because the reasons in support of it did not outweigh the reasons in support of the rival ethical claim.[69]

If a judge is faced with an adjudication of a dispute between two parties, each of which adheres to a valid but incompletely comparable claim of justice, it is not a sufficient and adequate justification to point out that she is forced to 'select' and therefore can just 'pick' one at random.[70] The judge cannot be indifferent between the incompletely comparable claims of justice. She is not faced with a choice between two types of cheese, neither of which is superior to the other. In such kind of situation, she can just pick one because, with respect to what matters, namely stilling her appetite, it does not matter (much) whether she picks the one rather than the other. Important claims of justice differ from personal preferences, desires, tastes or opinions. The judge is neither free to select the claim she likes, nor to flip a coin if she prefers both. There is a significant difference between a choice situation in which one can be rationally indifferent and an ethical or moral choice situation. In the case of (roughly) equally good options (that is, options that are more or less interchangeable with respect to what is relevant to the choice) it is true that there is no reason to choose one option rather than the other. But in those cases there is no rational irresolvability or undecidability because it does not matter which option is chosen; one can be indifferent. Indecisiveness in those cases would be tantamount to Buridan's ass's irrational paralysis.[71] By contrast, if ethical or

68. Nagel, "The Fragmentation of Value," 129.
69. For a further description of different kinds of rationally justified choice, such as rationally permissible (partially rationally justified) and rationally required (completely rationally justified) choice, see (reference removed to maintain anonymity).
70. Cf. Ullmann-Margalit and Morgenbesser, "Picking and Choosing."
71. In Amartya Sen's explanation of *Buridan's ass*, the donkey died of hunger due to his own irrationality. He was confronted with two roughly equal haystacks and, having no reason to choose one rather than the other, he could not make a choice. But his indecisiveness was ungrounded because he could have rationally chosen either. After all, if options are roughly equally good, it does not matter much which one is chosen. See Sen, *On Ethics and Economics*, pp. 67–68.

moral claims differ (very much), it matters (very much) which one is fulfilled; one cannot be indifferent.

If one has a personal belief, or subjective preference, desire or liking for the one alternative rather than the other, why would this not be sufficient for justifying the choice? These factors are to a great extent shaped and determined by our upbringing, education, cultural influences or the natural and social lottery.[72] Therefore, if we allow such factors to determine the choice, the justification will be morally arbitrary.

6.5. Implications for Justice

Justice is a complex concept, the aspects of which are related to important human values such as basic liberties, equality, concern for the worst-off, desert, efficiency, security and privacy. Its multifaceted nature entails that "justice is not some one rule, principle, or maxim, but many, which do not always coincide in their dictates":[73] claims based on need may clash with claims based on desert; priority to the worst-off may be in tension with efficiency and maximization of welfare or other advantages (such as health benefit); liberty may interfere with equality; public security with privacy; one human right with another human right;[74] etc. These tensions should be resolved by establishing priorities and balancing rival claims. As I mentioned in the introduction Rawls emphasizes the importance of impartial and determinate rational weight assignment:

> Institutions are just when . . . the rules determine a proper balance between competing claims. . . . The assignment of weights is an essential part of a conception of justice. If we cannot explain how these weights are to be determined by reasonable ethical criteria, the means of rational discussion have come to an end.[75]

Similarly, Griffin argues that if the resolution of conflicts between rights is not to be arbitrary, "one must know how to attach weight to them."[76] Dworkin writes that "[w]hen principles intersect . . . , one who must resolve the conflict has to take into account the relative weight of each."[77] The importance of impartial and decisive weight assignment for justice is symbolized by Justitia's scales, blindfold and sword. However, again, the key question is how we can determine the required impartial and decisive weights where competing de-

72. Cf. Rawls, *A Theory of Justice*; Cohen, "On the Currency of Egalitarian Justice."
73. Mill, *Utilitarianism*, 54. Cf. Sidgwick, *The Methods of Ethics*, 447: "[T]he different elements included in the notion of Justice . . . are continually liable to conflict with each other."
74. See, for instance, Clapham, *Human Rights*, chap. 6; and Griffin, *On Human Rights*, chap. 3.
75. Rawls, *A Theory of Justice*, 37.
76. Griffin, *On Human Rights*, 66.
77. Dworkin, *Taking Rights Seriously*, 26.

mands of justice are incommensurable and incompletely comparable.[78] If the argument of this essay is correct, in the relevant cases these weights cannot be determined for the simple reason that incomplete comparability entails the non-existence of determinable weights.[79] This seems to prevent a proper function of Justitia's scales and to lead to incomplete rankings of justice.[80] This means that, in the relevant cases, either decision is only partially justified in the double sense of incomplete and biased. Either decision acts against an undefeated reason of justice and has, consequently, an *ethical deficit*.[81]

Because the relevant conflicts concern incommensurable claims of justice, a coin flip or a lottery would not resolve the issue in a single right way. Besides, conflicts between important claims of justice should not be dealt with via a coin flip, a method where not reason but randomness determines. Also, a majority rule or aggregation of opinions would not resolve the relevant issues in the right way. Justice based on changing majorities lacks stability, predictability and equal treatment of equal cases. Minorities, who have a legitimate claim in the relevant conflict, will be disadvantaged by the power of the majority. A majority-based outcome would confirm Thrasymachus's view in Plato's *Republic* that "justice is the advantage of the stronger party."

78. Rawls is one of the few political philosophers who have explicitly recognized the problem of incommensurability and indeterminability for questions of justice. A large part of his theory consists of attempts to resolve this problem. As Russell Hardin (*Indeterminacy and Society*, 105) argues, "Making his own theory overcome indeterminacy is a central, driving concern that has largely been neglected in the voluminous literature responding to Rawls's theory." See also D'Agostino, *Incommensurability and Commensuration*. Rawls (*A Theory of Justice*) points out that intuitions about the right balance of principles of justice differ considerably between rational and reasonable persons, and that this creates problems for an impartial and decisive adjudication of rival claims. In section 7 ('Intuitionism') of his *A Theory of Justice* he gives insightful examples of interpersonally different intuitive balances between principles. He realizes that these differences are partly caused by the fact that people adhere to divergent conceptions of the good that are not only conflicting but "even incommensurable" (*Political Liberalism*, 133).
79. Cf. Alasdair MacIntyre (*After Virtue*, 246): "[there is] no method of weighing, no rational criterion for deciding between claims based on [one value of justice, e.g., legitimate entitlement] against, claims based on [another, e.g., concern for need]. Thus these [different types of] claims are indeed, as I suggested, incommensurable."
80. Cf. Sen, *Inequality Re-examined*, 45ff., 134; "Incompleteness and Reasoned Choice." Sen distinguishes 'tentative incompleteness' (due to inconclusiveness, awaiting resolution) from 'assertive incompleteness' (due to irresolvable indeterminability). If the incomplete comparability thesis defended in this essay is true, here it concerns assertively incomplete rankings of justice.
81. This is a strong claim for which a more comprehensive foundation is given in Boot, *Incommensurability of Values and Implications for Justice*.

7. Avoidance of the Need of Relative Weight Assignment

In this essay I discuss the question of how to choose between two options if one option is better with respect to one ethical, moral or prudential value and the other option is better with respect to another ethical, moral or prudential value, while the two values are incommensurable and symmetrical. In the philosophical literature we can find at least five putative solutions to such value conflicts. They are summarized in Table 1. As we discussed above, many philosophers regard weight assignment (solution 1) as the right solution in many value conflicts. The primary aim of the present essay is to show that—in contrast to what is generally believed—incommensurability of values may pose signifi-

Table 1. Putative solutions to conflicts of values

Putative solutions to conflicts of values	What does it mean?	Which option is the right one to choose?
1. Weight assignment	Attaching relative weights to the values	The option with the largest overall weight
2. Commensuration[82]	Reducing the values to a supervalue, *V* (e.g., monetary value or utility)	The option with the largest amount of *V*. Example: Utilitarianism.
3. Reconciliation	Pursuing a balance or integration between the values (e.g., by reinterpretation of the values in the light of each other or in the light of one's ends). 'The Aristotelian approach.'[83]	The option that represents the best integration or comes closest to a 'mutual fit' or right balance or integration of the relevant values.
4. Prioritization	Lexical ordering of values or principles; that is, some values (however small their amounts) have absolute priority to some other values (however large their amounts).	The option which contains (the largest amount of) the lexically prior value or satisfies the lexically prior principle. Example: Rawls's lexical ordering of principles of justice.[84]
5. Procedural/constructivist approach	Procedure or construction which avoids direct and substantive comparisons of plural and conflicting values.	The option which is selected by an agreed-upon procedural rule (e.g., majority rule) or another construction that governs actions. Example of the latter: Rawls's theory of justice.

82. In the context of the present essay this solution is somewhat odd because incommensurability means that commensuration is impossible. However, adherents to utilitarianism argue that values which cannot be reduced to each other because of their different dimensions can be reduced to 'utility.' If this reduction to utility is appropriate and legitimate (which is doubtful, especially with respect to questions of ethics and justice [cf. Rawls, *A Theory of Justice*]), the heterogeneity of values does not pose problems for the comparability of the options and the solution of conflicts of values.
83. See, for instance, Richardson, *Practical Reasoning about Final Ends*, for examples and a defense of this approach.
84. Rawls, *A Theory of Justice.*

cant problems for a completely rationally justified and impartial assignment of relative weights. The paper is relevant to all thinkers who believe that the value conflicts under consideration should be resolved by weighing the alternatives. This does not exclude that some value conflicts may be resolved in other ways than weighing the alternatives, for instance by the utilitarian approach, reconciliation (the 'Aristotelian approach'), prioritization or constructivist procedures (solutions 2, 3, 4 and 5 of table 1). However, it seems implausible that these approaches can always and adequately avoid the problems of weighing incommensurable alternatives in the kind of value conflicts described in this essay. I further discuss and substantiate this in my forthcoming book *Incommensurability and its Implications for Practical Reasoning, Ethics and Justice*.

8. Conclusions

The implications of incommensurability of values for the justification of public, moral and ethical decisions between competing options are largely underestimated. One of the causes is a widespread and persistent misconception of the consequences of incommensurability of values for the comparability of options. A central characteristic of two incommensurable values is the absence of any level of equivalence: no amount of one value is (roughly) equal in worth to any amount of the other. Under specific conditions incommensurability of values causes 'incomplete comparability' of options. Some leading theorists interpret this in terms of 'imprecise equality' and 'imprecise comparability.' This interpretation is mistaken and conceals significant implications for practical and ethical reasoning.

Philosophers often argue that if we want a non-arbitrary and rationally justified resolution of conflicts of values, we must know how to assign weights. The conclusion of this essay is that—where incommensurability causes incomplete comparability—determinate and impartial weight assignment is impossible. This has important consequences for an adequate and sufficient justification of public and ethical decisions, the application of 'indifference curves' and the ranking and integration of demands of justice to the extent that they depend on *weighing* human values and ethical principles.

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