I suggest that there is an analogous infection at work in the Hume–Mackie view (though, as with indirect utilitarianism, one far from its authors' intentions). For an adherent of that view must be aware that the domain of morality$_n$ is only needed to counteract certain unfortunate and contingent features of social life, which it might, after all, be better to attack directly, in the hope of eliminating them, or at least reducing their significance. Increase 'to a sufficient degree the benevolence of men or the bounty of nature' and you can 'render justice useless'. (This thought, of course, can only be strengthened by the arguments advanced in part (1) of the previous section: scarcity can be attacked at a number of points, and 'egoism' will seem more contingent than ever.)

Hence the inclination to see justice as a merely 'remedial virtue'[31] and the tendency among both liberal-minded jurists and Marxist critics, to see 'rights' as linked to the 'individualism' of capitalist societies.[32] Hence the altogether disastrous tendency of Marxism, and certain other forms of socialist and communitarian thinking, to take a hostile view of 'justice', 'rights', and the morality of duty and to look forward to a withering away of this kind of morality —morality$_n$—in a more communitarian society which has overcome, or greatly diminished, scarcity and egoism, and in which 'nobler virtues, and more favourable blessings' will prevail—a community beyond justice and rights.

If the arguments of this chapter are cogent, all of this is a deep and dangerous mistake (not that John Mackie made it; but his view encourages it). If they hold, then morality, in the narrow sense, is a fundamentally important part of morality as a whole, deeply rooted in every possible form of social life and inseparable therefore from every attainable social ideal. To think otherwise is not to take morality seriously.

[31] M. Sandel, *Liberalism and the Limits of Justice* (Cambridge: Cambridge Univ. Press, 1982), pp. 31–2.

[32] See T. Campbell, *The Left and Rights: A Conceptual Analysis of the Socialist Idea of Rights* (London: Routledge & Kegan Paul, 1983).

3
Incommensurability in Science and Ethics

L'Addition

LE CLIENT. Garçon, l'addition!

LE GARÇON. Voila. [*Il sort son crayon et note.*] Vous avez . . . deux œufs durs, un veau, un petit pois, une asperge, un fromage avec beurre, une amande verte, un café filtre, un téléphone.

LE CLIENT. . . . Et puis des cigarettes!

LE GARÇON. [*Il commence à composer.*] C'est ça même . . . des cigarettes . . . Alors ça fait . . .

LE CLIENT. N'insistez pas, mon ami, c'est inutile, vous ne réussirez jamais.

LE GARÇON. !!!

LE CLIENT. On ne vous a donc pas appris à l'école que c'est ma-thé-ma-ti-que-ment impossible d'additioner les choses d'espèce différente!

LE GARÇON. !!!

LE CLIENT. Enfin, tout de même, de qui se moque-t-on? . . . Il faut réellement être insensé pour oser essayer de tenter d'additionner' un veau avec des cigarettes, des cigarettes avec un café filtre, un café filtre avec une amande verte et des œufs durs avec des petits pois, des petits pois avec un téléphone. Pourquoi pas un petit pois avec un grand officier de la Légion d'Honneur, pendant que vous y êtes! [*Il se lève.*] Non, mon ami, croyez-moi, n'insistez pas, et vous fatiguez pas, ça ne donnerait rien, vous entendez, rien . . . pas même le pourboire.

[*Et il sort en emportant le rond de serviette à titre gracieux.*]

Jacques Prévert,
Histoires et d'autres Histoires
(Paris: Galimard, 1963).

Incommensurability is not, in itself, a particularly exciting idea. At its simplest, it is the thought that, in some respect, certain things cannot

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be ranked. Of course, everything can be compared with anything in *some* respect, so, secondly, an assertion of incommensurability could be the claim that, in some significant or relevant respect, things are not rankable. Or, thirdly, if two things are said to be incommensurable *overall*, it could simply be that they are rankable in too many different ways that cannot in turn be combined into a single way. Whichever of these is meant, to rank is to make some kind of a mistake. More formally, we can say that two items I_1 and I_2 are incommensurable if and only if, in respect of a given variable F, I_1 is neither superior nor inferior to I_2, nor are they equal in value (call this *specific incommensurability*); or they are incommensurable if and only if this is so in some significant or relevant respect or respects $F_{r. . .n}$ (call this *relevant incommensurability*); or, finally, if and only if the various ways of ordering them, $F_{1. . .n}$, are non-congruent (call this *overall incommensurability*).

The first sense is illustrated by the diversity of pleasures. It makes no sense (for those who appreciate both and are not utilitarians) to weigh the joy of listening to Mozart against the satisfaction of a good meal, in respect of pleasure or utility. Jacques Prévert's client illustrates the second by subverting our conventional acceptance of Pigou's 'measuring rod of money' as significant and relevant to restaurant life. (Other areas of life are, fortunately, as yet still immune to its rule and to the pretensions of cost-benefit and utilitarian styles of thinking.) We exhibit the third when we refuse to make an overall ranking of, say, the music of Bach and that of Beethoven.

Yet the idea of incommensurability has become a source of excitement in two areas of contemporary thought: the philosophy and history of science, on the one hand, and moral and political philosophy, on the other. Some have suggested that there is at least an analogy between the two areas, and thus perhaps the idea plays a similar role in both. Thus Kuhn makes much of the analogy between scientific and political revolutions, and Feyerabend says both that he is an anarchist and a follower of John Stuart Mill's liberalism; while W. Newton Smith can entitle his chapter on Kuhn 'From Revolutionary to Social Democrat' and that on Feyerabend 'The Passionate Liberal'.[1] In this chapter I shall argue that the idea of incommensurability, in both domains, is exciting because of the reasons for which it has been held to obtain, and that these differ across the two domains of science and ethics. I shall also argue that in the former they are poor reasons; but that in the latter they are compelling and important.

[1] Newton Smith, *The Rationality of Science* (London: Routledge & Kegan Paul, 1981), chaps. 5 and 6. I am much indebted to Newton Smith's arguments in the first part of this essay.

I

The two philosophers of science who have made most of this notion and have made the greatest impact with it are, of course, Thomas Kuhn and Paul Feyerabend. Feyerabend observes that, for Kuhn, paradigms between which incommensurability may hold incorporate (A) *concepts* which, when it does hold, cannot be brought into the usual logical relations of inclusion, exclusion, and overlap; (B) *perceptions*, which 'make us see things differently'; and (C) *methods* (intellectual, as well as physical instruments of research) for setting up research and evaluating its results.[2] And it is true that the early Kuhn penned sentences like this: 'Practising in different worlds, the two groups of scientists see different things when they look from the same point in the same direction.'[3] By contrast, Feyerabend reports, his 'own research started from certain problems in area A and concerned theories only'—though he later resumed 'the more general approach',[4] whose results are to be found in *Against Method*, where he defines incommensurability as holding when 'a discovery, a statement, or an attitude' suspends some of the principles which constitute and impose 'something like a "closure"' upon 'a point of view (theory, framework, cosmos, mode of representation) . . . whose elements (concepts, "facts", pictures) are built up in accordance with' such principles.[5]

Where Kuhn and Feyerabend may have continued to differ is over the question of the interrelations between A and B. For Feyerabend, 'not all conceptual changes lead to changes in perception' for 'there exist conceptual changes that never leave a trace in the appearances':[6] thus one cannot automatically infer from 'popular theories in science, such as the theory of relativity, or the idea of the

[2] Feyerabend, *Science in a Free Society* (London: NLB, 1978), p. 66.
[3] T. S. Kuhn, *The Structure of Scientific Revolutions* (Chicago, Ill.: Univ. of Chicago Press, 2nd edn., 1970), p. 150.
[4] Feyerabend, *Science in a Free Society*, p. 67 and n.
[5] Id., *Against Method* (London: NLB, 1975), p. 269. [6] Ibid.

motion of the earth, to cosmology and modes of perception'.[7] And indeed, in his 'Second Thoughts on Paradigms', Kuhn continues to stress what he sees as the intimate connections between community-relative conceptual structures and perception: 'shared examples can serve cognitive functions', he claims, namely to induce 'a learned perception of similarity'. Indeed, this idea of 'shared examples' was the originally intended meaning of 'paradigm', which he then 'unfortunately' allowed to expand.[8]

In short, we may conclude that, unlike Kuhn, Feyerabend for a while confined the scope of incommensurability to concepts and theories; and that Kuhn tends to assume, as Feyerabend does not, that the various elements—concepts, perceptions, and methods—between which they both claim it to hold, are tightly interdependent and mutually reinforcing.

We have thus far considered the scope of incommensurability, but the question of the alleged basis or reasons for it is of greater interest. Here it is unquestionably Feyerabend who is the bolder, or more reckless, of the two thinkers. For him, it arises when 'the conditions of concept formation in one theory forbids the formation of the basic concepts of the other',[9] or again when

> the conditions of meaningfulness for the descriptive terms of one language (theory, point of view) do not permit the use of the descriptive terms of another language (theory, point of view); mere difference of meanings does not yet lead to incommensurability in my sense.[10]

Thus 'A-facts and B-facts cannot be put side by side, not even in memory', nor is it 'possible to *translate* language A into language B':[11] they both 'never make sense together'.[12] With incommensurability, in short, the differences between A and B go as deep as can be, for they result from 'a change of the very conditions that permit us to speak of objects, situations, events'. What we *mean* in so speaking is radically, that is incommensurably, transformed. In this way, when theories are incommensurable, 'they deal with different worlds . . . the change [from one world to another] has been brought about by a switch from one theory to another'.[13]

[7] Feyerabend, *Science in a Free Society*, p. 238.
[8] Kuhn, *The Essential Tension* (Chicago, Ill.: Univ. of Chicago Press, 1977), pp. 309 n., 318–19.
[9] Feyerabend, *Science in a Free Society*, p. 68 n.
[10] Id., *Farewell to Reason* (London: Verso, 1987), p. 272.
[11] Id., *Against Method*, p. 270.
[12] Id., *Science in a Free Society*, p. 70.
[13] Ibid.

This is heady stuff, and indeed the early Kuhn was inclined to write in similar ways (e.g. 'the proponents of competing paradigms practise their trades in different worlds'.[14]) But his later pronouncements are significantly more restrained. For Kuhn, unlike Feyerabend (whose irrationalism he finds 'vaguely obscene'),[15] the question of how, if theories are to be incommensurable, they could be incompatible was real, as was the need to make sense of scientific progress. Accordingly, the later Kuhn speaks, as Feyerabend does not, of the proponents of different incommensurable theories being like 'native speakers of different languages' between whom 'communication . . . goes on by translation'. That communication can be 'partial' and break down; indeed, Kuhn now asserts, there are 'significant limits to what the proponents of different theories can communicate to one another'.[16] Moreover, there are shared 'canons that make science scientific', which are '*the* shared basis for theory choice', though 'individually the criteria are imprecise' and 'when deployed together, they repeatedly prove to conflict with one another'.[17] These, in fact, constitute Kuhn's surviving reasons for sticking with incommensurability (continuing, as he does, to refer to 'duck-rabbits', Gestalt-switches, conversion, etc.): namely, that theory choice is influenced, but not uniquely determined, by values, that are in turn ambiguously interpretable and mutually conflicting, and are themselves without further justification; and that, in consequence, there is no paradigm-neutral standard for what counts as a good explanation.

It may help, at this point, if we try to list the reasons, or alleged reasons, for claiming that theories, or their components, can be incommensurable, in order of increasing boldness (or recklessness). First, there is (1) the claim, just alluded to, that scientists appeal to *values* in theory choice. As examples Kuhn cites five: accuracy, consistency, broad scope, simplicity, and fruitfulness. To these Newton Smith has added others: the preservation of past observational successes, track-record, inter-theory support, smoothness in coping with failures, and compatibility with well-grounded metaphysical beliefs.[18] Why should such values, or good-making features of theories, suggest incommensurability?

[14] Kuhn, *The Structure of Scientific Revolutions*, p. 150.
[15] I. Lakatos and A. Musgrave (eds.), *Criticism and the Growth of Knowledge* (Cambridge: Cambridge Univ. Press. 1970), p. 264.
[16] Kuhn, *The Essential Tension*, p. 338.
[17] Ibid. 324–5, 322.
[18] Newton Smith, *The Rationality of Science*, pp. 226–32.

I suggest that there are three such reasons, but they do not, even together, add up to a good reason. The first is that values are not uniquely interpretable: 'individuals may legitimately differ about their application to concrete cases'—indeed this 'individual variability in the application of shared values may serve functions essential to science'.[19] The second is that they conflict: scientists will differ about the 'relative weights to be accorded to these and to other criteria when several are deployed together'.[20] The third is that they are held to be without justification: in Kuhn's words, 'the experience of scientists provides no philosophical justification for the values they deploy (such justification would solve the problem of induction)'.[21] But the first two reasons together only serve to make Kuhn's familiar, if important, point that for practising scientists there is no '*shared* algorithm of choice'.[22] At most, the second implies that, for them, theories may manifest 'overall incommensurability', since *ex ante* they are rankable in too many ways that cannot be combined into a single way. *Ex post*, however, the problem dissolves: subsequent developments sooner or later select out which criterion or criteria turn out to have been the best indicator(s) of progress.

These first two reasons certainly do not, as Kuhn seems to think, show that theory-choice cannot be rationally grounded, which is the third (alleged) reason for incommensurability, namely, that all we can say is that theory-choice goes according to 'different sets of shared values'[23] and 'the decision of the scientific group'.[24] To say this is to deny that these values have a rational basis as reliable, if fallible, inductive indicators of increasing verisimilitude and of scientific progress, as measured by observational success. Neither Kuhn nor Feyerabend, nor anyone else, has given any good reason for denying this. At best, Kuhn has pointed to the crucial role of *judgement* in interpreting, applying, and weighing these values and, importantly, to the role of the scientific community's traditions and practices of training, debate, and mutual monitoring in developing, testing, and combining individual scientists' powers of judgement. But, once again, Kuhn has not shown that what makes for good judgement is just a matter of community decision.

The second alleged reason for incommensurability of theories is what is claimed to be variation in the standards which specify what

[19] Kuhn, *The Essential Tension*, p. 322.
[20] Ibid. 324. [21] Ibid. 335. [22] Ibid. 331. [23] Ibid.
[24] Kuhn, *The Structure of Scientific Revolutions*, p. 170.

counts as a good explanation. This may be thought to be a consequence of variance of values, which we have already considered, or it may go beyond this to cover the 'method, problem-field and standards of solution accepted by any mature scientific community at any given time'.[25] So, Kuhn writes,

> as the problems change, so, often, does the standard that distinguishes a real scientific solution from a mere metaphysical speculation, word game or mathematical play. The normal scientific tradition that emerges from a scientific revolution is not only incompatible but often actually incommensurable with that which has gone before.[26]

But this is a poor argument. For, first, the examples Kuhn cites appear to show, rather, shifts in assumptions about what is to be explained. And second, and more deeply, the argument trades on an ambiguity, or worse an equation, between 'explanation' as a psychological or 'subjective' category (whatever is considered to solve puzzle X by scientist Y) and explanation as an evaluative notion (distinguishing between success and failure, about which Y may be mistaken). In short, successful revolutionaries (Galileo, Newton, Faraday, etc.) have generated results that bear on the observation, prediction, and control of nature, to which their Old Regime forebears, whatever their views about the scope and nature of explanation, could not but attend. Doubtless they had different views about what constitutes explanation and doubtless they drew the boundary between science and metaphysics in a different place, but they shared with their successors the cognitive interests and goals in terms of which those successors eventually come to win the argument. As Richard Rorty admits, 'Galileo, so to speak, won the argument' with Cardinal Bellarmine, but this is not, as he suggests, because Galileo *created* 'the notion of "scientific values"',[27] except in the sense that he detached them from others with which they were previously indistinguishably fused. What was new was the focus on observational success, predictive accuracy, and so on, irrespective of theological and cosmological warrant. Of course, who 'wins the argument' may only emerge in time, long after the revolution is over, but the reasons for declaring the winners are not themselves just another product of the Revolution itself.

[25] Ibid. 103. [26] Ibid.
[27] R. Rorty, *Philosophy and the Mirror of Nature* (Oxford: Blackwell, 1980), p. 331.

I turn, finally, to the third, and boldest, alleged reason for incommensurability, namely (3) the thesis of *meaning variance*. This is a thesis abandoned in any radical form by Kuhn but one to which Feyerabend appears ever more closely wedded. It is a position which, however often it is refuted, continues to have a remarkably seductive power, even over philosophers.

At its weakest, (3*a*), it is only theoretical terms that are affected. On this account the meaning of observational terms remains constant while that of theoretical terms may change, if there is a corresponding change in what Carnap calls the 'meaning postulates' that fix their meaning. Under a radical or dramatic theory change, as from Newton to Einstein, this would occur, so that 'mass' would have a different meaning in the two theories, and Einstein would no longer be disagreeing with Newton in respect of its invariance.

A stronger version, (3*b*), still allows that the meaning of observational terms can remain constant, but, appealing to a holistic theory of meaning, holds that the meaning of all theoretical terms necessarily changes with every theory change. On this account, the whole of Newton's and Einstein's theories are incommensurable, and therefore non-conflicting, at the theoretical level, though they could be incompatible at the observational level.

The strongest version, Feyerabend's, (3*c*), abandons the distinction between theoretical and observational levels and the assumption of a theory-neutral observation language. On this account, again assuming a holistic theory of meaning, every theory change entails meaning change in all terms, and hence neither theories nor their components can be compared, judged compatible or incompatible, superior or inferior or equal to one another.

None of (3*a*), (3*b*), and (3*c*) has yet been coherently defended. (3*a*) relies on the separate identification of 'meaning postulates' in a theory, and both (3*a*) and (3*b*) on the satisfactory drawing of an observation/theory distinction—neither of which can be done. It is, in any case, (3*c*) that constitutes the full-blown case for incommensurability, and that case is in poor shape. To assert incommensurability thus understood is, as Feyerabend admits, to deny translatability across putatively incommensurable theories. But, if this denial is meant seriously, what grounds do we have for regarding a putatively incommensurable theory as a theory at all? Is it not incoherent to 'tell us that Galileo had "incommensurable" notions *and then go on to describe them at length*'?[28] To do the latter, one must be able to make sense of others' (e.g. Galileo's) utterances, beliefs, and desires so that they come out as intelligible (that is, as either true or explicable). For this to be possible, there must be a bridgehead across theories of common reference, of a concept of truth and related notions, and indeed of a vast fund of shared assumptions about what it is reasonable to believe.[29]

It might seem that the above requirements are too strong. Might a scientist (Galileo, say) not be able to recognize as a theory another that was so *advanced* (Einstein's, say) that he could not understand it (e.g. because it employed a branch of mathematics higher than any he could grasp)? But this would, so to speak, be *one-way* incommensurability, for Einstein, in this case, could, *ex hypothesi*, both understand and rank the two theories. Incommensurability, to do the work its advocates expect of it, must be a reflexive, two-way relation: incommensurable theories must be mutually unintelligible. Notice, moreover, that the supposition of one-way incommensurability here entertained itself presupposes the idea of scientific progress, which the advocates of two-way incommensurability are precisely concerned to debunk.

So (3*c*)—the full version of incommensurability as radical meaning variance—fails too. The trouble with it is its dependence on a holistic theory of meaning that has been cut adrift from reference and truth, and makes meaning dependent on a particular stock of beliefs. Were it coherently stateable, its effect would be to render unintelligible 'what makes science scientific', the convergence of theories and the possibility of scientific progress. None of this would be an objection, however—indeed for some it would be an advantage—if this version of incommensurability could be coherently stated in the first place.

From all of which I conclude that the notion of incommensurability, in any form, in science has not yet been advanced for any good reasons. Theories are not specifically incommensurable, with respect to explanatory power, or any of the other science-relative values we have considered. They do not display relevant incommensurability: no one, from within science, can claim that such rankings of theories

[28] H. Putnam, *Reason, Truth and History* (Cambridge: Cambridge Univ. Press, 1981), p. 114.

[29] See M. Hollis and S. Lukes (eds.), *Rationality and Relativism* (Oxford: Blackwell, 1982), esp. the essays by Hollis, Lukes, and Newton Smith.

are irrelevant from some standpoint from which they appear unrankable. And, as we have seen, *ex ante* conflicts between multiple value-rankings are dissolved *ex post*. Therefore, the idea of incommensurability has nothing to contribute to the explication of theory choice or to the solution of other issues in the philosophy of science. There is, in short, no good reason for doubting that scientific theories can in principle be judged to be better or worse or equivalent to each other.

II

Among certain Anglo-Saxon anti-utilitarian and liberal moral and political philosophers the idea of incommensurability of 'values' has, in recent years also been a persistent theme. In his *Two Concepts of Liberty*, Sir Isaiah Berlin wrote:

> If the claims of two (or more than two) types of liberty prove incompatible in a particular case, and if this is an instance of the clash of values at once absolute and incommensurable, it is better to face this intellectually uncomfortable fact than to ignore it, or automatically attribute it to some deficiency on our part which could be eliminated by an increase in skill or knowledge; or, what is worse still, suppress one of the competing values altogether by pretending that it is identical with its rival—and so end by distorting both.[30]

Bernard Williams endorses Berlin's view that there is no 'common currency' in which certain 'gains and losses of value can be computed, that values, or at least the most basic values, are not only plural but in a real sense incommensurable' and argues that 'the claim that values are incommensurable does say something true and important'.[31] For John Rawls, liberalism as a political doctrine supposes that 'there are many conflicting and incommensurable conceptions of the good, each compatible with the full rationality of human persons': indeed, this plurality of incommensurable conceptions of the good' is a 'fact of modern democratic culture' and 'must be taken as given'.[32] Charles Larmore writes that 'we have an

[30] Introduction to Berlin's *Four Essays on Liberty* (Oxford: Oxford Univ. Press, 1969), p. 1.

[31] Williams, 'Conflicts of Values', in his *Moral Luck* (Cambridge: Cambridge Univ. Press, 1981), pp. 76–7.

[32] Rawls, 'Justice as Fairness: Political not Metaphysical', *Philosophical and Public Affairs* 14 (1985), pp. 248, 249.

allegiance to several different moral principles that urge independent claims upon us (we cannot plausibly see the one as a means for promoting the other)' and that 'the ultimate sources of moral value are not one, but many'. He therefore advocates that we 'suspend the monistic assumption underlying so much of moral theory' and acknowledge that 'not everything is good and right to the extent that it is commensurable with respect to any single standard'.[33]

According to Charles Taylor, 'Integrity, charity, liberation, and the like stand out as worthy of pursuit in a special way, incommensurable with other goals we might have, such as the pursuit of wealth, or comfort, or the approval of those who surround us'; 'admiration and contempt are bound up with our sense of the qualitative contrasts in our lives, of their being modes of life, activities, feelings, qualities, which are incommensurably higher'.[34] (This last phrase is either self-contradictory or paradoxical. If the latter, perhaps the paradox can be resolved by the thought that from *within* certain modes of life, etc., certain others appear not fit to be compared.) Amartya Sen allows the possibility of an approach to value conflict which, 'faced with an irreducible conflict of compelling principles . . . may admit both the superiority of one alternative over the other and the converse'.[35] For Joseph Raz, incommensurability obtains where, when an agent is faced with only two options, 'one cannot compare the value of the options, one can only judge their value each one on its own'. He also writes of 'constitutive incommensurabilities' which

> play their part in conventions of fidelity to relationships and pursuits. Being engaged in a pursuit or a relationship includes belief that certain options are not comparable in value . . . Regarding a particular relationship as a proper subject for an exchange damages or even destroys it.

Thus it is 'impoverishing to compare the value of a marriage with an increase in salary. It diminishes one's potentiality as a human being to put a value on one's friendship in terms of improved living conditions.'[36] Finally, Thomas Nagel, who has explored this issue

[33] Larmore, *Patterns of Moral Complexity* (Cambridge: Cambridge Univ. Press, 1987), pp. 138, 10.

[34] Taylor, 'The Diversity of Goods', in his *Philosophical Papers*, ii. *Philosophy and the Human Sciences* (Cambridge: Cambridge Univ. Press, 1985), pp. 236–7, 240.

[35] Sen, *Ethics and Economics* (Oxford: Blackwell, 1987), p. 66.

[36] Raz, *The Morality of Freedom* (Oxford: Clarendon Press, 1986), pp. 364, 355–6, 353.

most deeply, argues that, when 'faced with conflicting and incommensurable claims we still have to do something—even if it is only to do nothing', but the fact that action must be unitary does not imply that justification must be, and that, unless it is, 'nothing can be either right or wrong and all decisions under conflict are arbitrary'. For Nagel, 'values come from a number of viewpoints, some more personal than others, which cannot be reduced to a single denominator'.[37]

What does this battery of assertions amount to? Notice, first, that several different items are here said to be incommensurable, and that some of these exemplify the bases or criteria by which we judge what is of value, and others what we take to *have* value: thus they refer variously to alternative 'values', 'conceptions of the good', 'goals', and 'claims' upon moral agents, but also to 'alternatives' or 'options' facing them, to 'relationships and pursuits, and to 'modes of life, activities, feelings, qualities'. Notice, too, that here—as opposed to the idea of scientific incommensurability—what is incommensurable is assumed to be in conflict. Moreover, some of these writers appear to be denying cardinal commensurability only (with respect to a 'common currency' or 'any single standard' or a 'single denominator'); others seem to be denying both cardinal and ordinal commensurability—the very possibility, in certain cases, of consistently ordering moral and political alternatives.

As in the case of alleged incommensurability in science, there are several different ideas in play here that, likewise, range from the cautious to the bold, or reckless. Let us begin with the simple idea of incomplete ordering. In this sense, life is full of insignificant or marginal incommensurabilities,[38] cases where we just don't know which of two options we value more. I may just not know whether I value going for a walk more or less highly than reading a book or that I value them equally (and that I do either or neither does not show that I do).[39] As Raz observes, marginal incommensurability creates 'pockets of breakdown of comparability' which, however, pose no threat, say, to a consequentialist who believes, among other things, that all reasons are rankable in strength or weight or importance.[40] But, the consequentialist will argue, once the choice becomes significant, that is, where the reasons for them are weighty and different, that the options must be rankable. But why? The only reason for holding that non-trivial choices must be between rankable options is that one's reductionist meta-ethical assumptions, or prejudices, dictate that it must be so, that diverse kinds of good must be reducible to a homogeneous descriptive magnitude (such as utility) and subject to a complete and transitive ordering.

[37] Nagel, 'The Fragmentation of Value', in his *Mortal Questions* (Cambridge: Cambridge Univ. Press, 1979), pp. 134, 138.
[38] Raz, *The Morality of Freedom*, p. 328.
[39] Ibid. [40] Ibid. 268–9.

There are several reasons for holding that it is not so. Consider, first, the case of moral dilemmas. Sartre's young man caught between the claims of consoling his mother and joining the Free French, Antigone between those of family loyalty and Creon's law, Agamemnon between saving his fleet and his daughter, Weber's heroic politician between the Sermon on the Mount and the 'dignity of manly conduct'—and most of us at some time or another in less exalted and tragic circumstances—face the pull of conflicting demands where it looks as if neither choice is unambiguously right and either involves the committing of an uncancelled wrong. It is always possible, of course, to treat such cases as opportunities for consequentialist calculation, on the assumption that the question 'what is the best thing to do, all things considered?' has a right answer that is in principle ascertainable. It is also possible to treat them as subject to universalizable categorical principles or maxims of action of a formal kind that would clearly specify what is right. The trouble is that each of these modes of treatment eliminates the essential feature of the cases in question that requires articulation: namely, the conflict of obligations, that clash of right with right where whatever one does cannot but cause a wrong.

Consider, next, the cases, raised by Raz, of what he calls 'constitutive incommensurabilities'. The idea here is that the commitments, loyalties, and obligations we have to certain relationships and activities that matter to us precisely involve 'the belief that certain options are not comparable in value':

> My claim . . . is that belief in incommensurability is itself a qualification for having certain relations. The attitude of mind which constitutes such a belief is analogous to attitudes such as respect for the other person, which are commonly accepted as prerequisites for a capacity for these relations.

Thus, for example, 'only those who hold the view that friendship is neither better nor worse than money or other commodities are

capable of having friends'.[41] To assume commensurability between certain options is itself evidence of the weakening or absence of those very relationships, or else a degraded simulacrum of them. Unfortunately, Raz distracts us from the point of this very interesting argument by confusing non-rankability with non-exchangeability. Ranking friends and money does not imply exchanging money for friendship, or being prepared to do so. Doing the second may mean doing the first, but the argument in question concerns the first, not the second. And indeed, there does seem to be something in the idea that the very thought of comparing the value of certain activities and relationships with certain alternatives is evidence of a failure of those who think it to live up to them.

Thirdly, consider alternatives that are yet broader in scope: modes of life, ways of interpreting and responding to the world and acting within it. Taylor invites us to consider a life devoted to the pursuit of personal integrity, or Mother Teresa as exemplifying 'a Christian model of *agape*', or what is involved in a movement for colonial liberation. One could add other examples: the Hindu world-renouncer,[42] the Evangelical soldier of God, the Muslim fundamentalist, the militant nationalist, the epicurean, the ecologist. Each of these is expressed in 'languages of qualitative contrast' which embody the sense that 'some ways of living and acting have a special status' and 'stand out above others' while others are 'debased'.[43] There is no way of ranking such modes of life and the virtues they encourage other than from within one or another of them, or from some standpoint, such as utilitarianism or Kantianism, that makes a special claim to objectivity or impartiality. But these also express particular modes of life and their special claims are precisely what the modes of life they would evaluate put in question.

I have here presented various kinds of alternative that are held to have value, between which a choice is indubitably significant, and I have offered reasons why they can be unrankable in respect of their value. What is the source of this incommensurability? The answer to this lies, I suggest, in what Thomas Nagel calls the 'fragmentation of

[41] Raz, *The Morality of Freedom*, pp. 356, 351, 352.

[42] See L. Dumont, *Homo Hierarchicus: Essai sur le système des castes* (Paris: Gallimard, 1966) (trans as: *Homo Hierarchicus: The Caste System and its Implications*) (London: Paladin, Granada, 1972).

[43] Taylor, 'The Diversity of Goods', p. 236.

value', John Rawls the 'fact of pluralism',[44] and Charles Larmore the 'heterogeneity of morality'—though the trouble with this last phrase is its suggestion that 'morality' is a domain whose boundaries are uncontested: better to say that the heterogeneity or pluralism or fragmentation characterize evaluation in general. They identify what monism denies: that our judgments about what has value are not located within a single scheme of values but are made from various irreducibly diverse standpoints.

This is what Max Weber saw when he wrote that 'the various value spheres of the world stand in irreconcilable conflict with one another'. What is sacred may not be beautiful; indeed, it may be sacred because it is not. Since Nietzsche, Weber wrote, we know that

> something can be beautiful, not only in spite of the aspect in which it is not good, but rather in that very aspect. You will find this expressed earlier in the *Fleurs du Mal*, as Baudelaire named his volume of poems. It is commonplace to observe that something may be true although it is not beautiful and not holy and not good. Indeed it may be true in precisely those aspects. But all these are only the most elementary cases of the struggle that the gods of the various orders and values are engaged in.[45]

And within the ethical sphere itself, contested though its boundaries are, we can be drawn in irreconcilable ways. On the one hand, there are compelling moral demands of an impersonal or impartial kind that are couched in thin ethical concepts that abstract from context, such as maximizing of happiness or welfare or well-being, or the maxims of the categorical imperative or the protection of rights. Such demands may themselves pull us in opposing ways. But, on the other hand, there are also demands of a more personal or partial kind, couched in the thicker, more contextual concepts that express our commitments to particular relationships, or communities or activities.[46] And these, in turn may conflict both with one another and with the demands of more impersonal moralities.

[44] Rawls, 'The Idea of an Overlapping Consensus', *Oxford Journal of Legal Studies* 7/1 (1987), 4. Rawls characterizes the 'fact of pluralism' as the diversity of general and comprehensive doctrines, and . . . the plurality of conflicting, and indeed incommensurable, conceptions of the meaning, value and purpose of human life (or what I shall call for short 'conceptions of the good') affirmed by the citizens of democratic societies (p. 4).

[45] Weber, 'Science as a Vocation', in H. H. Gerth and C. W. Mills (eds.), *From Max Weber* (London: Routledge & Kegan Paul, 1948), pp. 147–8.

[46] See the writings of Alasdair MacIntyre and Bernard Williams for reflections on this contrast between types of morality and moral language.

This diversity of standpoints from which moral demands come has two consequences. The first is that what is valuable about what we value cannot be identified in terms of a single category: the idea that there is a 'descriptive homogeneity of goods' is, as Sen puts it, an 'arbitrary requirement'.[47] The second is that the diversity of standpoints explains the possibility that not all of these diverse goods can be ranked. They may be *specifically* commensurable, that is, from one specific value standpoint—as when E. M. Forster ranked the obligations of friendship above those of patriotism, or when one judges the claims of one's own children to outweigh a larger donation to relief of poverty in the Third World, or vice versa, or when the achievement of a measure of well-being outranks, say, the fulfilment of a person's or collectivity's goals or commitments, or the promotion of their freedom, or when rights 'trump' utility. But a wider, or truer, view of the moral complexity of the choice between such alternatives suggests that these rankings are, in one sense, *irrelevant*, since the *relevant* standpoint is one which incorporates the two, or several, standpoints from which the alternatives in conflict are seen to have value. From that reflexive and inclusive standpoint they may exhibit *relevant incommensurability*.

Of course, the fact that alternatives may be rankable multidimensionally—that is, along independent scales—does not itself entail incommensurability. One might solve the problem by constructing social welfare or social choice functions that are consistent and complete, ranging over sets of alternatives whose ranking *vis à vis* one another is a matter of 'balancing': one such combination is taken to be 'on balance' superior, inferior, or equal to another. But, as Sen has justly remarked, although the case for such 'balanced complete ordering' is strong in the case of institutional public policy-making, which 'must at some stage, require unambiguous instruction' (since something must be done even if it is nothing), it does not follow that 'there must be *adequate reason* for choosing one course rather than another'. The mere need for a decision does not resolve the conflict or show that the alternatives thus ordered are commensurable—that is that there are adequate reasons for judging them superior, inferior, or equal to one another.

Another possibility is that an overall ranking across the independent scales can yield a determinate solution by 'dominance reasoning'

[47] Sen, *Ethics and Economics*, p. 67.

where one alternative is better than another in all respects. But such orderings are partial and depend on the congruence of parallel evaluations from the different value standpoints. In the absence of such special conditions, evaluations from diverse standpoints will exhibit *overall incommensurability* where those standpoints cannot be combined to form a single, coherent picture. Pluralists assert, and monists deny, that morality is heterogeneous and that valuation in general is fragmented in just this way.

III

In the first part of this chapter I argued that in science, theory choice is guided by values whose interpretation is contested and which sometimes conflict with one another. Why, in that case, should the pluralism just endorsed for valuation in general not apply to science in particular, thereby implying that scientific theories can be incommensurable?

The reason is that the values that guide theory choice are just that—guides. They serve as uncertain and fallible clues to scientific success. And *that* is not generally subject to disputes from diverse value standpoints; it is, on the contrary, what justifies scientists in judging and comparing theories according to these various, not always congruent values. For they furnish criteria for particular theory choices that, inductively, can generally be relied on to satisfy what Mary Hesse has called the general 'pragmatic criterion' for the long-term acceptability of theory complexes taken as wholes, and if they fail to satisfy it, it is because the latter overrides them. This general criterion is 'the ability to use science to learn the environment, and to make predictions whose results we can rely on not to surprise us'.[48] It is over this underlying and overriding value of predictive success and hence control of the external world that scientists unite (though of course it does not capture all that they do *qua* scientists), and it is by means of it that their various value-guided theory choices are eventually judged. What can make alternatives incommensurable is the ineliminable plurality of standpoints from which their value can be described and compared. What makes science scientific is the common evaluative standpoint that scientists share over time, whatever values may at any given time divide them.

[48] M. Hesse, *Revolutions and Reconstructions in the Philosophy of Science* (Brighton: Harvester, 1980), pp. 190, xviii–xix.