

PART I

# Background



# Theory and Practice

In the public debate about moral issues such as racial equality and abortion, deeply felt convictions struggle against an ambiguity the locus of which is not hard to identify. We inherit two distinct ways of discussing ethical issues. One of these frames these issues in terms of principles, rules, and other general ideas; the other focuses on the specific features of particular kinds of moral cases. In the first way general ethical rules relate to specific moral cases in a *theoretical* manner, with universal rules serving as "axioms" from which particular moral judgments are deduced as theorems. In the second, this relation is frankly *practical*, with general moral rules serving as "maxims," which can be fully understood only in terms of the paradigmatic cases that define their meaning and force.

The modes of argument associated with each approach are familiar provided that we consider them one at a time. When we discuss specific cases of conscience in concrete detail and practical terms, aside from the abstract theoretical arguments of moral theology and philosophical ethics, we understand either mode of reasoning well enough. But if we ask how these two kinds of arguments relate together, we find ourselves at a loss.

How far and in what respects do general ethical doctrines carry weight when we deal with specific moral problems in complex practical situations?

Conversely, how far and in what respects can one rely on particular perceptions about specific situations when criticizing general doctrines in ethical theory?

Nowadays the received view is that particular moral decisions simply apply universal ethical rules to particular cases; while moral decisions are sound to the extent that they are validly deduced from such rules:

In this situation, such an action would be murder;  
Murder is invariably and universally wrong;  
So, acting in that way would be inescapably wrong.

The least we can do to reply to this view is to argue, first, that it oversimplifies a far more complex practical relationship and, second, that the “applying” and “deducing” which moral reasoning is said to involve are quite mysterious, unless we show in detail *just how* appeals to “universal principles”—whether framed in religious, philosophical, or everyday terms—help to resolve moral quandaries in practice. Certainly the experience of the National Commission casts some doubt on this view. So long as the commissioners discussed specific cases, their consensus showed how far they shared moral perceptions in practice: the moment they turned to consider the theoretical principles that underlay those particular perceptions, they lacked a similar consensus. How, then, can it be said that the particular judgments about which they evidently *agreed* were, all alike, “deduced from” universal principles about which they openly and plainly *disagreed*?

#### THE CLASSICAL ACCOUNT

The relevance of general matters of abstract theory to the specific problems of concrete practice may be obscure in ethics; but it has never been obscure *only* in ethics. So let us start by asking how this general relationship was originally analyzed in antiquity, and then see what light this classical account still throws on current issues.

The first explicit account was developed by the philosophers of classical Athens. Their prototype of “theoretical” reasoning was *geometry*. There the starting point was a few general statements the meaning of which was clear and the truth of which was beyond question: from these were derived, by formal deduction, conclu-

sions that were neither obvious nor self-explanatory. Starting from elementary definitions and statements about lines and angles, surfaces and solids, for instance, one might prove the famous theorem of Pythagoras, that

the area of a square constructed on the longest side of a right-angled triangle is equal to the sum of the areas of squares constructed on the two shorter sides;

or the far more surprising result attributed to Plato's student, Theaetetus, (who died tragically early) that

only five ways exist of fitting together equilateral plane figures, e.g., triangles, squares or pentagons, so as to form regular convex solids.<sup>1</sup>

The rigor of geometry was so appealing, indeed, that for many Greek philosophers formal deduction became the ideal of *all* rational argument. On this view an opinion can be accepted as "knowledge," or an argument as truly solid, only if it is related deductively ("necessarily") to clear and obvious initial principles. So, it seemed, the whole of geometry might follow necessarily from an unquestioned set of definitions and general statements; and these were subsequently organized into canonical form, as the "axioms" of Euclidean geometry. In due course, too (the hope was), other sciences would find their own unquestioned general principles to serve as their starting points, in explaining, for example, the natures of animals, plants, and the other permanent features of the world.<sup>2</sup>

If this were only done, all true sciences would be able to argue with the same necessity as geometry. When the scientist (geometer, zoologist, or whatever) works with clear and self-evident theoretical principles, his certainty of their truth will outweigh all his opinions about the particular facts he uses to explain them. He will grasp the definitions of "equilateral plane figure" and "regular convex solid" with more certainty than he can ever have about Theaetetus' theory of the five regular convex solids. Indeed, all sciences with well-formulated principles share this feature: their general principles are better understood, and known with greater certainty, than any of the specific conclusions they are used to explain.

How far, on this classical account, does the scope of "theory" reach? Not all of our knowledge, Aristotle argued, is of this sort; nor do we have this theoretical kind of certainty in every field.<sup>3</sup> In *practical* fields we grasp particular facts of experience more clearly, and

have more certainty of their truth, than we ever do about the general principles that we may use to account for them. As an illustration, he cites the everyday belief that chicken is good to eat (i.e., nourishing).<sup>4</sup> Knowing *that* chicken is good to eat, he argues, is one thing, but knowing *what makes it* good to eat is quite another. Practical experience assures us of the initial fact quite apart from any subsequent nutritional explanation. What makes chicken good to eat is perhaps the fact that it is a light meat: that being so, a scientific explanation will read,

Chicken is a light meat; light meats are easy to digest; so chicken is easy to digest. That is why it is good to eat.

But the true explanation may be quite other, or even unknown. Still, however uncertain the explanation remains in theory, the gastronomic fact that chicken is good to eat is not, in practice, seriously in doubt. Direct human experience testifies to it in advance of any explanation.

How is it that in such cases we are surer of the facts to which experience testifies directly than we are of the general principles that explain them? Why is the relationship between principles and instances here apparently reversed? The reason (Aristotle adds) is that we have left the realm of Theory for that of Practice.<sup>5</sup> In the realm of Practice, certitude no longer requires a prior grasp of definitions, general principles, and axioms, as in the realm of Theory. Rather, it depends on accumulated experience of particular situations; and this practical experience gives one a kind of wisdom—*phronesis*—different from the abstract grasp of any theoretical science—*episteme*. On Aristotle's account this reversed relationship between principles and cases is typical of those fields of knowledge that are by nature "practical" rather than "theoretical."<sup>6</sup>

The realm of the practical included, for Aristotle, the entire realm of *ethics*: in his eyes the subject matter of moral reflection lay within the sphere of practical wisdom rather than theoretical comprehension. We return to this point in the next chapter, where we shall look at the *Nicomachean Ethics* in more detail. For the moment (one may remark), if Aristotle was right about this, the reversed locus of certitude in the deliberations of the National Commission should have been expected!<sup>7</sup>

The classical account of Theory and Practice involved three further distinctions. In theoretical fields such as geometry, statements or arguments were *idealized*, *atemporal*, and *necessary*:

1. They were “idealized” in the following sense. Concrete physical objects, cut out of metal in the shapes of triangles or circles, can never be made with perfect precision, nor can the metal sheets from which they are cut stay perfectly flat, so that they exemplify the truths of geometry only approximately. The idealized “straight lines” and “circles” of geometry, by contrast, exemplify such truths with perfect exactness.
2. They were “atemporal” in the following sense. Any geometrical theorem that is true at one time or on one occasion will be true at any time and on any occasion. Pythagoras did not “prove” some temporal concrete fact that just happened to be true in his particular time but a permanent relationship that held good “universally.” So there was no question of his theorem *ceasing* to be true at some later time.
3. Finally, theoretical arguments were “necessary” in a twofold sense. The arguments of Euclidean geometry depended for their validity both on the correctness of the initial axioms and definitions and on the inner consistency of the subsequent deductions. Granted Euclid’s axioms, all of his later theorems were “necessary consequences” of those initial truths. If any of the theorems were questioned, conversely, this implied either that their starting point was incorrect or else that the steps taken in passing to the theorems were formally fallacious.

In all three respects, practical statements and arguments differed from theoretical ones by being *concrete*, *temporal*, and *presumptive*.

1. They were “concrete” in the following sense. Chickens are never idealized entities, and the things we say about cooking make no pretense to geometrical perfection. A particular chicken may be “exceptionally delicate,” but it is never “only approximately [still less,  $\pm 0.05\%$ ] a chicken.” Thus the truth of practical statements rests on direct experience: abstraction or idealization do not protect them from experiential challenges.
2. They were “temporal” in this sense. The same experience that teaches what is normally the case *at any time* also teaches what is the case *only sometimes*. (Chicken is edible all year round, but game birds are stringy if taken out of season.) Truths of practical experience thus do not hold good “universally” or “at any time”: rather, they hold “on occasion” or “at *this or that* moment”—that is, usually, often, at most always.
3. Finally, practical arguments were “presumptive” in this sense. Chicken is normally good to eat, so a particular chicken just brought from the store is “presumably” good to eat. In unusual cases that conclusion may be open to rebuttal: the chicken in question may have been left too long in summer heat and gone

bad. The presumptive conclusion is, however, open to doubt "in point of fact": no one is denying the initial generalization, or questioning the formal validity of the presumptive inference. Still, if we depart far enough from the "normal" or "typical" cases, reasonable conclusions based on the soundest presumptive arguments may, in practice, be upset.

All three crucial features of the classical account were connected. Statements in geometry were atemporal, and its arguments necessary, just because they did not refer to familiar objects such as metal plates and chickens but to idealized entities such as *the circle* and *the triangle*. By contrast, practical statements were temporal and the corresponding arguments presumptive simply because they referred to actual events, agents, and objects, particular circumstances, and specific places and times. When telescoped together, these distinctions had another, unhelpful effect. They turned the original contrast of Theory with Practice into an outright divorce. So the "atemporal" world of intellectual reflection and certain knowledge was set apart from the "temporal" world of practical actions and corrigible opinions; and the timeless insights of intellectual theorists were esteemed above the workaday experience of the practical craftsman. Eventually the "atemporality" of Theory was even interpreted as implying that its subject matter was Immutable and its truths Eternal, and it became associated with the unchanging *celestial* world. Meanwhile the temporality of Practice was equated with Transitoriness and linked to the changeableness of *terrestrial* things. With this divorce the "immortal" world of universal theoretical principles was separated from the "mortal" world of particular practical skills and cases.<sup>8</sup> The ripples caused by this equation have been influencing Western thinking ever since.

#### THE CLASSICAL ACCOUNT AND ITS MODERN RELEVANCE

How far is this account of Theory and Practice still relevant today? Certainly skeptics can find reason to ignore it. Nobody today credits Euclidean geometry with the universal absolute truth it promised 2,500 years ago: the mathematical creation of non-Euclidean geometries brought to light an unlimited range of axiom systems, each of which generates a consistent sequence of theorems. Nor does anyone today suppose that the theories of natural science



share the formal certainty of geometrical theorems, whether Euclidean or non-Euclidean; still less that they are as abstract as Greek geometry. Over the last two hundred years, in fact, scientists have given up trying to “prove” their theoretical principles self-evidently true; rather, they now take pride in being “empirical” philosophers. So at a time when science and technology are interacting so closely, we can no longer suppose that an unbridgeable intellectual gulf divides the theoretical insights of science from the practical procedures of the arts, crafts, or industry.

The divorce of Theory from Practice is thus a thing of the past, and no purpose is served by reviving it. As an analytic contrast, however, we cannot ignore the *distinction* between them, for two distinct reasons. First, the problem of matching principles (e.g., ethical principles) to cases (e.g., moral cases) affects all fields of human experience in which general rules are invoked to support practical decisions that require specific actions affecting the personal circumstances of individual human beings. In clinical medicine and civil engineering, economics and politics, quite as much as in ethics, the universality of general principles must still be squared with the particularity of specific decisions.

Issues of public administration, law, and medicine (as of ethics) thus become truly problematic just at the point at which rules, laws, and other theoretical generalizations apply ambiguously or marginally, or at which alternative rules or principles point in contrary directions and have to be arbitrated between. Three sample scenarios will illustrate the point:

An elderly widow comes to the Social Security office, claiming that she has been wrongly deprived of her old-age pension payments. On investigation it turns out that the contributions her immigrant husband paid before his death were barely sufficient to qualify her for a pension at all.

A patient comes to a physician's office with an unusual combination of fever and pallor, earache and bronchial congestion. The doctor is in doubt whether this is an unusually severe case of the current influenza or whether it indicates, rather, the far more dangerous onset of a more serious disease—for example, meningitis.

A plaintiff testifies in civil court that she injured herself on a defective stairway, which her landlord negligently left unrepaired. Another tenant testifies, to the contrary, that the staircase was not badly maintained and alleges that the plaintiff was drunk at the time of the fall.

What is involved in dealing with such problems? All three issues involve matters of judgment, which arise out of initially ambiguous or marginal situations where no "universal principle" can settle the matter once and for all. In real life practical issues of these kinds are resolved by looking at the concrete details of particular cases. Are there, after all, weighty reasons of equity to allow the widow's claim to a pension, treat the sick patient on the basis of the less probable but more threatening diagnosis, or award the injured tenant damages in spite of her possible contributory drunkenness? At the end of the day we simply have to decide in which direction the strongest demands of administrative equity, the most pressing medical indications, or the testimony of the most credible witnesses finally point *in this case*.

Once this practical judgment is exercised, the resulting decisions will (no doubt) be "formally entailed by" the relevant generalizations, but that connection throws no light on the grounds by which the decisions are arrived at, or on the considerations that tilt the scale toward one general course of action rather than the other. What such decisions involve can be explained only in *substantive* and *circumstantial* terms. The demands of administrative equity, the significance of alternative diagnoses and therapeutic indications, or the probative weight of contrary witnesses: all of these raise questions of rational substance, not logical form, and particular decisions (say, to prescribe a treatment designed to deal with the likely influenza while guarding against a possible meningitis) call for substantive balancing of the foreseeable risks and prospective benefits of alternative actions, with an eye to the detailed circumstances of the actual situation.

The analytic contrast between Theory and Practice is important for a second reason: the classical account implied both that theoretical statements can make universal claims which hold good at any place or time *only* if they are as idealized as the axioms or theorems of Greek geometry, and that theoretical arguments lead to necessary conclusions *only* if they are cut off from concrete objects and practical experience. By our standards both implications are exaggerated; but each of the classical contrasts in itself can still throw light on the current practice of the sciences: notably, on the contrasted ways in which intellectual problems arise *within* theories (when general ideas are dealt with in their own terms) and *outside* them (when those general ideas are applied to specific cases, or in particular circumstances).

In scientific theory today general ideas are no longer divorced from actual objects, yet they are still "idealized" in a weaker sense: they

refer directly only to preselected objects, which exemplify them precisely enough to be relevant to the theory. In practical professions such as medicine, by contrast, the procedures are "concrete" in a similarly weakened sense: they apply equally to every case that presents itself, and every instance is equally relevant for practical purposes. To physicists engaged in refining gravitation theory, the motions of planets and earth satellites are of direct interest, whereas the fluttering of a falling sheet of paper is not. Astronomical movements and falling papers both exemplify gravitation, but planets and satellites provide straightforward and unadulterated cases of gravitation in action, in a way that fluttering papers do not. Even if we recorded a sheet of paper's falling precisely, using a high-speed cinema camera, the gravitational aspects of that event cannot in practice be separated from the effects of air currents and other outside influences. Being directly interested in exact theoretical issues and general ideas, physical scientists thus learn from planetary movements in a way they cannot learn from falling sheets of paper: in a physicist's eyes (so to say) the fluttering papers "do not count." So the standing of the physical sciences as exact, idealized, and theoretical disciplines is purchased only at a price. They are "exact and idealized" because they are highly *selective*: they pay direct attention only to circumstances and cases that are "abstracted" (i.e., selected out) as being relevant to their central theoretical goals.

In the same weaker sense, practical fields such as law, medicine, and public administration deal with concrete actual cases, not with abstract idealized situations. They are directly concerned with immediate facts about specific situations and individuals: general ideas concern them only indirectly, as they bear on the problems of those particular individuals. Unlike natural scientists, who are free to decide in advance which types of situations, cases, or individuals they may (or need not) pay attention to, physicians, lawyers, and social service workers face myriad professional problems the moment any client walks through the door. They may end up by referring some of those clients to other, more appropriate professionals, but they cannot choose to ignore them or their problems. Where scientists study specific cases for any light they can throw on general theoretical ideas, members of the service professions, conversely, study general ideas for any help they can give in dealing with specific practical cases.

The intellectual claims of scientific theory today may no longer refer beyond the familiar changing world of temporal experience, but

in their own way scientific principles are still “atemporal”: covering *all* relevant cases, *anywhere*, at *any* time. Conversely, the practical goals of the service professions are still, in the corresponding sense, “temporal”: focusing on *specific* cases and *particular* occasions. A physicist lecturing about high-energy particle theory may refer both to observations made last week at the Stanford Linear Accelerator Center and to events that supposedly took place long ago, soon after the cosmological Big Bang. Because his concerns are not specifically tied to particular times or places, there is nothing incongruous in his discussing both in the same terms. The fundamental question for him is, “What phenomena are shared at all times, in all contexts?” and the *universality* of theory makes all times and places equivalent. Conversely, what matters most to the practicing lawyer or physician is the *particularity* of the problems facing this individual client or patient here and now: his professional duty is to find out the unique features of the present client’s particular problems.

This contrast, between the *atemporal* focus of scientific theory and the preoccupation of legal and medical practice with the *here and now*, is a crucial difference between “theory” and “practice” as those terms are now understood. Scientists study particular events occurring here and now primarily for the light they can throw on universal atemporal theories: practitioners appeal to universal atemporal theories chiefly for the help they may give in dealing with practical problems arising here and now. So, far from reflecting any opposition between Theory and Practice, the varied concerns of scientists and practitioners complement one another.

Another feature of the analytic contrast between Theory and Practice concerns the solidity of argument in each. Within scientific theories today arguments are no longer accepted on a priori grounds alone, but they are still “necessary” in a less ambitious sense. So long as any scientific conclusion follows from theoretical principles strictly, that inference is valid formally quite as much as substantively. Conversely, when practical arguments go beyond the scope of any formal theory their conclusions are “presumptive” in a similar sense. Their soundness depends not on formal validity alone but on the richness of the substantive support for any general ideas they use and the accuracy with which any particular case has been recognized and classified.

Clinical physicians and medical scientists, for instance, may have occasion to discuss the same bacterial infections in either of two ways. They may do so in *general theoretical terms*: