FACT AND VALUE PURPORT TO BE POLAR OPPOSITES: FACTS being absolute, material, objective and impersonal; values relative, spiritual, subjective, and personal; facts being verifiable by the rigorous, austere methods of science; values being subject to no such assessment. The facts, they say, don’t lie. So every factual disagreement has a determinate resolution. Whether barium is heavier than plutonium is a question of fact; and whatever the answer, there are no two ways about it. Values, if they don’t precisely lie, are thought perhaps to distort. So evaluative disputes may be genuinely irresolvable. Whether, for example, a Van Gogh is better than a Vermeer might just be a matter of opinion. And on matters like these, everyone is entitled to his own opinion. Such is the prevailing stereotype.

I believe that stereotype ought to be rejected; for it stifles our understanding of both fact and value. Far from being poles apart, the two are inextricably intertwined: the demarcation of facts rests squarely on considerations of value; and evaluations are infused with considerations of fact. So factual judgments are not objective unless value judgments are; and value judgments are not relative unless factual judgments are. I want to suggest that tenable judgments of both kinds are at once relative and objective.\(^1\)

First, let us look at the facts. When we proclaim their independence from and indifference to human concerns, we forget that we are the ones who set and enforce the standards for what counts as a fact. We stipulate: “a thing cannot both be and not be,” or “no entity without identity,” or “whatever is is physical.” The Absolute and the Arbitrary (forthcoming, Cornell, 1997). She is Co-author, with Nelson Goodman, of Reconceptions (Hackett, 1988). She has taught at Princeton University, Dartmouth College, and Wellesley College.

At the same time, we arrange for our standards to be met. We construct systems of categories that settle the conditions on the individuation of entities and their classification into kinds. Thus, for example, we devise a biological taxonomy according to which a dachshund is the same kind of thing as a Doberman, but a horse is a different kind of thing from a...
zebra. For all their clarity, scientific examples may mislead. We are apt to think that constructing a biological taxonomy is simply a matter of introducing terminology for what is already the case. Then prior to our categorization, dachshunds and Dobermans were already alike; horses and zebras, already different. The problem is that any two things are alike in some respects and different in others. So likeness alone is powerless to settle matters of categorization. In classing dachshunds and Dobermans together, horses and zebras apart, we distinguish important from unimportant similarities. That is, we make a value judgment.

The selection of significant likenesses and differences is not, in general, whimsical. It is grounded in an appreciation of why a particular classificatory scheme is wanted; and this, in turn, depends on what we already believe about the subject at hand. If our goal is to understand heredity, for example, it is reasonable to group together animals that interbreed. Then despite their obvious differences, dachshunds and Dobermans belong together; and despite their blatant similarities, horses and zebras belong apart.

More general considerations come into play as well. If our system is to serve the interests of science, the cognitive values and priorities of science must be upheld. Membership in its kinds should be determinate and epistemically accessible. There should be no ambiguity and no (irresolvable) uncertainty about an individual’s membership in a kind. The classification should be conducive to the formulation and testing of elegant, simple, fruitful generalizations, and should perhaps mesh with other scientific classifications of the same and adjacent domains. In constructing a system of categories suitable for science, then, we make factual judgments about what the values of science are, and how they can be realized.

Science streamlines its categories in hopes of achieving exceptionless, predictive, quantitative laws. Narrative has quite different ends in view, being concerned with the particular, the exceptional, the unique. So schemes suited to narrative enterprises exhibit different features from those suited to science. Scientific vices — ambiguity, imprecision, immeasurability, and indeterminacy — are often narrative virtues. The complex characterization of the emotional life that we find, for example, in the novels of Henry James requires a baroque conceptual scheme whose involuted categories intersect in intricate and subtle ways. Equally complex categories may be required to achieve the sort of understanding that biographers, historians, psychoanalysts and serious gossips strive to achieve.

A category scheme provides the resources for stating various truths and falsehoods, for exhibiting particular patterns and discrepancies, for drawing specific distinctions, for demarcating conceptual boundaries. Purposes, values, and priorities are integral to the design. They constitute the basis for organizing the domain in one way rather than another. The acceptability of any particular scheme depends on the truths it enables us to state, the methods it permits us to employ, the projects it furthers, and the values it promotes. Together, these constitute a system of thought. A failure of the components to mesh undermines the system, preventing it from doing what it ought to do.

We design category schemes with more or less specific purposes in mind and integrate into the scheme such values and priorities as we think will serve those purposes. But the values that our schemes realize are not always or only the ones we
intend to produce. Some are simply mistakes; others, inadvertent holdovers from prior systems; yet others, unintended byproducts of features we intentionally include. When pregnancy and aging are classified as medical conditions, they come to be considered and treated as diseases or disabilities — as deviations from a state of health. If Marx is right, the values of the ruling class are invisibly embedded in the social and economic categories of a society. And my students are convinced that a fundamental truth is revealed by the fact that witchcraft comes just after philosophy in the Library of Congress classification system.

As a first approximation, facts are what answer to true sentences. And different systems produce different truths. It is a truth of physics, not of botany, that copper is lighter than zinc. This alone does not lead to relativity, for such systems may complement one another, or be indifferent to one another. Relativity emerges when systems clash — when what is true according to one system is false according to another. Evolutionary taxonomy so groups animals that crocodiles and lizards are close relatives; crocodiles and birds, distant ones. Cladistic classification shows crocodiles and birds to be close; crocodiles and lizards distant. Each system divulges some affinities among animals and obscures others: neither invalidates the other. So whether it is a fact that crocodiles and lizards are closely related depends on a choice of system. According to a one system, any violation of the law is a crime; according to another, only serious violations — felonies — are crimes. So whether spitting on the sidewalk is a crime depends on which system is in use. According to one medical classification, health is the absence of disease; according to another, health is the absence of disease or disability. So whether a congenital defect renders a person unhealthy depends on which system is in effect. A single domain can be organized in a multitude of ways, and different schematizations may employ a single vocabulary. So under one schematization a given sentence — say, “Spitting on the sidewalk is a crime” — comes out true; under another, it comes out false. Truth then is relative to the system in effect.

Still, facts are objective. For once the system is in place, there is no room for negotiation. Events that are simultaneous relative to one frame of reference are successive relative to another. But it is determinate for each frame of reference whether given events are successive or simultaneous. Similarly, although some psychological systems consider neuroses to be mental illnesses and others do not, once a system is chosen, there is a fact of the matter as to whether a compulsive hand washer is mentally ill.

Such objectivity might seem spurious, if we can switch frameworks at will.
What is true according to one framework is false according to another. So can’t we just choose our facts to fit our fantasy? There are at least two reasons why we can’t. The first is that rightness requires more than truth. We need to employ an appropriate framework — one that yields the right facts. The fact that someone went to Choate, for example, neither qualifies nor disqualifies him for a federal judgeship. So a classification of candidates according to their secondary schools is inappropriate, even if it would enable us to choose the candidate we want. Correctness requires that the facts to which we appeal be relevant. Psychoanalytic categories are powerless to settle the issue of criminal insanity because they mark the wrong distinctions. People who cannot be held criminally liable for their actions are supposed to be, in some important respect, different from the rest of us. And the categories in question reveal no difference; for they characterize everyone’s behavior in terms of motives and desires that the agent can neither acknowledge nor control. So the facts that psychoanalytic theory reveals do not suit the purposes of the criminal court; they do not discriminate the class of criminally insane. Rightness of categorization thus depends on suitability to a purpose. An aspiring lepidopterist whose collection consists of larvae seems to have missed the point. Lepidopterists concentrate on mature forms — they collect butterflies, not caterpillars. Although biologists class butterflies and caterpillars together, butterfly collectors do not. Rightness here requires fit with past practice. The fellow fails as a lepidopterist because he employs radically nontraditional categories in selecting specimens for his collection.

Moreover, even though we construct the categories that fix the facts, we cannot construct whatever we want. If we take the notion of construction seriously, this will come as no surprise. Although we make all manner of inventions, we can’t make a non-fattening Sacher Torte, a solar-powered subway, or a perpetual motion machine. And although we design programs that endow computers with amazing abilities, we can’t get a computer to translate a natural language, compute the last digit in the number $\pi$, or beat a grand master at chess.

Some of these incapacities are irremediable; others will eventually be overcome. My point in mentioning them is to emphasize that construction is something we do; and we can’t do everything we want. Our capacities are limited; and our aspirations often interfere with one another. So there is no reason to think that we can convert any fantasy into fact by designing a suitable system. Plainly, we cannot.

In constructing a political system, for example, we’d like to maximize both personal liberty and public safety. We’d like, that is, to arrange for as many actions as possible to fall under the predicate “free to...” and as many harms as possible to fall under the predicate “safe from...”. But we can’t maximize both at once. The cost of security is a loss of liberty; and the cost of liberty, a risk of harm. With the freedom to carry a gun comes the danger of getting shot. So we have to trade the values of liberty and safety off against each other to arrive at a system that achieves an acceptable level of both.

In constructing a physicalistic system, we’d like all the magnitudes of elementary particles to be simultaneously determinate and epistemically accessible. But this is out of the question. For although we can measure either the position or the momentum of an electron, we can’t measure both at once.

In building a system of thought, we begin with a provisional scaffolding made of the (relevant) beliefs we already hold, the aims of the project we are embarked
on, the liberties and constraints we consider the system subject to, and the values and priorities we seek to uphold. We suspend judgment on matters in dispute. The scaffolding is not expected to stand by itself. We anticipate having to augment and revise it significantly before we have an acceptable system. Our initial judgments are not comprehensive; they are apt to be jointly untenable; they may fail to serve the purposes to which they are being put, or to realize the values we want to respect. So our scaffolding has to be supplemented and (in part) reconstructed before it will serve.

The considered judgments that tether today's theory are the fruits of yesterday's theorizing. They are not held true come what may, but accorded a degree of initial credibility because previous inquiry sanctioned them. They are not irreversible, but they are our current best guesses about the matter at hand. So they possess a certain inertia. We need a good reason to give them up. System-building is dialectical. We mold specific judgments to accepted generalizations, and generalizations to specific judgments. We weigh considerations of value against antecedent judgments of fact. Having a (partial) biological taxonomy that enables us to form the generalization "like comes from like" — that is, progeny belong to the same biological kind as their parents — we have reason to extend the system so as to classify butterflies and caterpillars as the same kind of thing. Rather than invoke a more superficial similarity and violate an elegant generalization, we plump for the generalization and overlook obvious differences.

Justification is holistic. Support for a conclusion comes not from a single line of argument, but from a host of considerations of varying degrees of strength and relevance. What justifies the categories we construct is the cognitive and practical utility of the truths they enable us to formulate, the elegance and informativeness of the accounts they engender, the value of the ends they promote. We engage in system-building when we find the resources at hand inadequate. To accommodate the impossibility of ascertaining both the position and the

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momentum of an electron, drastic revisions are required in our views about physics. But which ones? A number of alternatives have been suggested. We might maintain that each electron has a determinate position and a determinate momentum at every instant, but admit that only one of these magnitudes can be known. In that case, science is committed to the existence of things that it cannot in principle discover. Or we might contend that the magnitudes are created in the process of measurement. Then an unmeasured particle has neither a position nor a momentum, and one that has a position lacks momentum, since the one measurement precludes the other. Physical magnitudes are then knowable because they are artifacts of our knowledge-gathering techniques. But from the behavior of particles in experimental situations, nothing follows about their behavior elsewhere. Yet a third option is to affirm that a particle has a position and affirm that it has a momentum, but deny that it has both a position and a momentum. In that case, however, we must alter our logic in such a way that the conjunction of individually true sentences is not always true. That science countenances nothing unverifiable, that experiments yield information about what occurs in nature, that logic is independent of matters of fact—such antecedently reasonable theses are shown by the findings of quantum mechanics to be at odds with one another. Substantial alterations are thus required to accommodate our theory of scientific knowledge to the data it seeks to explain. Although there are several ways of describing and explaining quantum phenomena, none does everything we want. Different accommodations retain different scientific desiderata. And deciding which one to accept involves deciding which features of science we value most, and which ones we are prepared, if reluctantly, to forego. “Unexamined electrons have no position” derives its status as fact from a judgment of value—the judgment that it is better to construe magnitudes as artifacts of measurement than to modify classical logic, or commit science to the truth of claims it is powerless to confirm, or to make any of the other available revisions needed to resolve the paradox.

Pluralism results. The same constellation of cognitive and practical objectives can sometimes be realized in different ways, and different constellations of cognitive and practical objectives are sometimes equally worthy of realization. A sentence that is right according to one acceptable system may be wrong according to another.

But it does not follow that every statement, method, or value is right according to some acceptable system. Among the considered judgments that guide our theorizing are convictions that certain things—for instance, affirming a contradiction,
ignoring the preponderance of legal or experimental evidence, or exterminating a race—are just wrong. Such convictions must be respected unless we find powerful reasons to revise them. There is no ground for thinking that such reasons are in the offing. It is not the case that anything goes.

Nor does it follow that systems can be evaluated only by standards that they acknowledge. An account that satisfies the standards it sets for itself might rightly be faulted for being blind to problems it ought to solve, for staking out a domain in which there are only trivial problems, for setting too low standards for itself. An inquiry that succeeds by its own lights may yet be in the dark.

So far, I have argued for the value-ladenness of facts. I developed a scientific example in some detail, because science is considered a bastion of objectivity. If scientific facts can be shown to be relative and value laden, there is a strong prima facie case for saying that relativity and value-ladenness do not undermine objectivity. Then, if the objectivity of normative claims is to be impugned, it must be on other grounds.

I want to turn to questions of value. Not surprisingly, I contend that value judgments are vindicated in the same way as factual judgments. Indeed, normative and descriptive claims belong to the same systems of thought, and so stand or fall together. Still, some systems seem more heavily factual; others, more heavily evaluative. For now, I will concentrate on the latter.

In constructing a normative category scheme, as in constructing any other scheme, we are guided by our interests, purposes, and the problem at hand. Together these factors organize the domain so that certain considerations are brought to the fore. In restructuring the zoning laws, for example, it is advisable to employ consequentialist categories. For we need the capacity to tell whether things would in fact improve if the building code were altered in one way or another. We need then the capacity to classify and to evaluate in terms of outcomes. If we are concerned with developing moral character, it may be advisable to use predicates that can be applied with reasonable accuracy in self-ascription; for the capacity for self-scrutiny is likely to be valuable in moral development.

For like cases to be treated alike, the evaluations yielded by a moral or legal system must be coherent, consistent with one another, and grounded in the relevant facts. Fairness and equity are demanded of such a system; arbitrariness and caprice are anathemas to it. So logical and evidential constraints are binding on evaluation as well as on description.

The problems we face and the constraints on their solution often have their basis in the facts. Whether, for example, we ought to perform surgery to prolong the life of a severely defective newborn becomes a problem only when we acquire

"Unanticipated facts can thus put pressure on a system, by generating problems it cannot (but should) solve, yielding inconsistent evaluations, or producing counterintuitive verdicts."
the medical resources to perform such surgery. Prior to the development of the medical techniques, the question was moot. There was no reason to require a moral code to provide an answer. So a moral problem arises in response to changes in the facts.

Our previously acceptable moral code may never have needed, and so never have developed, the refinements required to handle the new case. Unanticipated facts can thus put pressure on a system, by generating problems it cannot (but should) solve, yielding inconsistent evaluations, or producing counterintuitive verdicts. Values that do not ordinarily clash may do so in special circumstances. Typically the physician can both prolong the lives of her patients and alleviate their pain. But not always. So a moral system that simply says she ought to do both is inadequate. It does not tell her how to proceed when the realization of one value interferes with the realization of the other. Our values then need to be reconsidered. In the reconception, previously accepted conclusions are called into question, competing claims adjudicated, a new balance struck. Our goal again is a system of considered judgments in reflective equilibrium. Achieving that goal may involve drawing new evaluative and descriptive distinctions or erasing distinctions already drawn, reordering priorities or imposing new ones, reconceiving the relevant facts and values or recognizing new ones as relevant. We test the construction for accuracy by seeing whether it reflects (closely enough) the initially credible judgments we began with. We test it for adequacy by seeing whether it realizes our objectives in theorizing. An exact fit is neither needed nor wanted. We realize that the views we began with are incomplete, and suspect that they are flawed; and we recognize that our initial conception of our objectives is inchoate, and perhaps inconsistent. So we treat our starting points as touchstones which guide but do not determine the shape of our construction.

Here too, pluralism results; for the constraints on construction do not guarantee a unique result. Where competing considerations are about equal in weight, different tradeoffs might reasonably be made, different balances struck. If any system satisfies our standards, several are apt to do so.

In child rearing, for example, we regularly have to balance concern for a child’s welfare against the value of granting him autonomy. Responsible parents settle the matter differently, some allowing their children greater freedom, some less. A variety of combinations of permissions and prohibitions seem satisfactory, none being plainly preferable to the rest. It follows then that a single decision—say, to permit a child to play football—might be right or wrong depending on which acceptable system is in effect. Rightness is then relative to system.

“Tolerance seems not to be an option, however, when systems dictate antithetical responses to a single case. For we must inevitably do one thing or another.”
But it does not follow that every act is right according to some acceptable system or other. It is irresponsible to permit a toddler to play with matches, and overprotective to forbid a teenager to cross the street. From the fact that several solutions are right, it does not follow that none is wrong. Some proposed resolutions to the conflict between welfare and autonomy are plainly out of bounds.

Nor does it follow that to be right according to some acceptable system is to be right simpliciter. Rightness further requires that the system invoked be appropriate in the circumstances. Although my freshmen's papers would rightly be judged abysmal failures if evaluated according to the editorial standards of the *Journal of Philosophy*, those are clearly the wrong standards to use. To grade my students fairly, I must employ standards appropriate to undergraduate work. (Then only some of their papers are abysmal failures.)

Can we rest satisfied with the prospect of multiple correct evaluations? Disconcertingly, the answer varies. If the systems that produce the several evaluations do not clash, there is no difficulty. We easily recognize that an accurate shot by an opposing player is good from one point of view (excellence in playing the game) and bad from another (our partisan interest that the opposition collapse into incompetence). And there is no need to decide whether it is a good or bad shot all things considered.

In other cases, multiplicity of correct evaluations may be rendered harmless by a principle of tolerance. We can then say that what is right according to any acceptable system is right. Thus one parent's decision on how best to balance paternalist and libertarian considerations in child rearing does not carry with it the commitment that all parents who decide otherwise are wrong. And one physician's decision on how to balance the value of alleviating pain against the value of prolonging life does not carry with it the commitment that all physicians who strike a different balance are wrong.

Tolerance is an option because the prescriptions for action apply to numerically distinct cases. So long as parents decide only for their own children and both parents agree about that, they can recognize that other parents might reasonably decide the same matters somewhat differently. Pluralism does not lead to paralysis here because the assignment of responsibility is such that conflicting right answers are not brought to bear on a single case.

Tolerance seems not to be an option, however, when systems dictate antithetical responses to a single case. For we must inevitably do one thing or another. The problem becomes acute in socially coordinated activity. If the several parties in a joint venture employ clashing systems, their contributions are likely to cancel each other out, diminishing the prospect of success. Although nothing favors the convention of driving on the right side of the road over that of driving on the left, leaving the choice to the individual driver would be an invitation to mayhem. We need then to employ a single system, even if the selection among acceptable alternatives is ultimately arbitrary.

In such cases, then, we invoke a metasystematic principle of intolerance. Even if there are several ways of equilibrating our other concerns, we mandate that an acceptable equilibrium has not been reached until a single system is selected. The justification for this mandate is the recognition that unanimity or widespread agreement is itself a desideratum that is sometimes worth considerable sacrifice to
achieve.

To be sure, an intolerant system remains vulnerable to criticism, revision, and replacement by a better system. The argument for intolerance is simply that where divided allegiance leads to ineffectiveness, a single system must reign. Successors there can be, but no contemporaries.

In the cases I’ve spoken of so far, both tolerance and intolerance look like fairly easy options. We readily agree to be intolerant about rules of the road, not only because we appreciate the value of conformity in such matters, but also because we recognize that nothing important has to be given up. It simply doesn’t matter whether we drive on the left or on the right, so long as we all drive on the same side. And we readily tolerate a range of child-rearing practices, because so long as certain broad constraints are somehow satisfied, small differences don’t much matter. The difference between a 10 PM curfew and a 10:30 one is unlikely to significantly affect a child’s well-being. In such cases we can agree, or respectfully agree to disagree, precisely because no deeply held convictions are violated in the process.

Sometimes, however, conflicts run deep. For example, the abortion problem arises because in an unwanted pregnancy, the value of personal autonomy clashes with the value of fetal life. Neither is trivial. So to achieve any resolution, a substantial good must be sacrificed. Each party to the dispute achieves equilibrium at a price the other is unwilling to pay; the one maintaining that even fetal life cannot compensate for the loss of liberty, the other maintaining that even liberty cannot compensate for the loss of fetal life. Nor can the parties civilly agree to disagree. For each is convinced that the position of the other is fundamentally immoral.

Both parties to the dispute can adduce powerful reasons to support their position. But neither has the resources to convince its opponents. Nor has anyone come up with a compromise that both sides can in good conscience accept.

The existence of such seemingly intractable problems might seem to support a subjective ethical relativism. Having found no objective way to resolve such dilemmas, we might conclude that all morality is relative to system, and the choice of a system is, in the end, subjective.

Without denying the difficulty that such problems pose, I want to resist the slide into subjectivism. Our practice bears me out. Even in the face of widespread disagreement, we do not treat such issues as subjective. If we did, we would probably be more charitable to those holding opposing views. How do we proceed?

Sometimes we deny that the problem remains unsolved. We contend that one of the positions, although still sincerely held, has actually been discredited. The holdouts, we maintain, overlook some morally relevant features of the situation, or improperly weigh the relevant ones. This response may well be correct. Advocates

“The argument for intolerance is simply that where divided allegiance leads to ineffectiveness, a single system must reign. Successors there can be, but no contemporaries.”
of Apartheid, however adamant, are just wrong. And they remain wrong even if they are too ignorant, biased, or stupid to recognize it.

So the failure of an argument to convince its opponents may be due to defects in their understanding, not to weaknesses in the argument. This has its parallel in science. The inability of any argument to convince my accountant of the truth of the Heisenberg Uncertainty Principle does not discredit the objectivity of the principle; it discredits her claim to have mastered quantum mechanics.

Alternatively, we might concede that a question is unanswered, without concluding that it is unanswerable. We then take it to be an outstanding problem for the relevant field of inquiry. All fields have such problems. And if our current inability to solve the problem of the origin of life does not impugn the objectivity of biology, our current inability to solve the problem of euthanasia should not impugn the objectivity of ethics. What such disagreements show is that work remains to be done. This is no surprise.

The objectivity of ethics does not ensure that we can answer every question. Neither does the objectivity of science. If a question is ill conceived or just too hard, or if our attempts are wrong-headed or unlucky, the answer may forever elude us. That success is not guaranteed is just an epistemological fact of life.

Nor does objectivity ensure that every properly conceived question has a determinate answer. So perhaps nothing determines whether the young man whom Sartre describes ought to join the Resistance or stay home and care for his aged mother. If the relevant considerations are in fact equally balanced, either alternative is as good (or as bad) as the other. The choice he faces then is subjective. But this does not make ethics subjective. For to say that personal predilections are involved in deciding among equally worthy alternatives is quite different from saying that personal predilections are what make the alternatives worthy. Subjective considerations function as tie-breakers after the merit of the contenders has been certified by other means.

I have suggested that factual and evaluative sentences are justified in the same way. In both cases, acceptability of an individual sentence derives from its place in a system of considered judgments in reflective equilibrium. Since equilibrium is achieved by adjudication, several systems are apt to be adequate. But since they are the products of different trade-offs, they are apt to disagree about the acceptability of individual sentences. So relativism follows from pluralism. Something that is right relative to one acceptable system may be wrong relative to another.

Still, the verdicts are objective. For the systems that validate them are themselves justified. The accuracy of such a system is attested by its ability to accommodate antecedent convictions and practices; its adequacy, by its ability to realize our objectives. Several applicable systems may possess these abilities; so several answers to a given question, or several courses of action may be right. But not every system possesses them; so not every answer or action is right. The pluralism and relativism I favor thus do not lead to the conclusion that anything goes. If many things are right, many more remain wrong.
Endnotes

1Copyright Catherine Z. Elgin. This paper was first published in Relativism: Interpretation and Confrontation, Michael Krausz, ed. (Notre Dame: University of Notre Dame Press, 1989).
5But not only then. We may attempt to modify a working system out of curiosity — to see how it works and whether it can be made to work better.