

2010

The Consequence of Human Differences

Joseph Vining

University of Michigan Law School, jvining@umich.edu

Available at: <https://repository.law.umich.edu/articles/1665>

Follow this and additional works at: <https://repository.law.umich.edu/articles>



Part of the [Animal Law Commons](#), [Law and Philosophy Commons](#), and the [Science and Technology Law Commons](#)

Recommended Citation

Vining, Joseph. "The Consequence of Human Differences." *J. L. Phil. & Culture* 5, no. 1 (2010): 21-42.

This Article is brought to you for free and open access by the Faculty Scholarship at University of Michigan Law School Scholarship Repository. It has been accepted for inclusion in Articles by an authorized administrator of University of Michigan Law School Scholarship Repository. For more information, please contact mlaw.repository@umich.edu.

The Consequence of Human Differences

JOSEPH VINING⁺

I. Introduction

This is an essay about law and its competitors. Or, better, about the legal form of thought and its competitors. By competitors I mean those forms of thought that would replace or absorb or explain or explain away or make superstructural or illusory the legal form of thought—there are many ways law's competitors describe what they would do or imagine they are doing.

I am going to consider here two of these competitors, both of them ways we have learned to think about Nature with a capital 'N'. The first is biological thought, which is built of course on physics and chemistry but is distinguished from them by its emphasis on evolutionary processes. I choose it because it is currently most prominent. The other is mathematics or the mathematical form of thought, which I choose because it is so pervasive and deeply rooted, with such ancient claims. Anything that can be said about its relation to the legal form of thought has something of an *a fortiori* quality when we turn to other competitors. Indeed, as we shall see, the mathematical form of thought is a competitor of current evolutionary thought itself, not just of law.

In brief, I will explore what is not there in law's competitors and what is there in law. The facts of experience, the realities, that are not there in law's competitors but are there in law are what make us human, which should not be surprising since it does not go too far to say that the basic purpose of law is to keep us human. I want to leave with you then the question what the fact of human law says about Nature.

It is evident at once that the first and most basic reality each of us experiences is missing from the biological and the mathematical both. This is the fact of our individuality coupled with the fact that there is more than one of us living. This the legal form of thought distinctively recognizes and faces. We are individuals, and we are different, each the center of our life and our universe, and this reality is connected to the facts of experience that bring us together and make us human together.

So basic is this that it can be said the legal form of thought is itself deep within its competitors, making them possible as forms of thought, and making possible

⁺ Harry Burns Hutchins Collegiate Professor of Law Emeritus, University of Michigan Law School.

the truth they offer us and that we accept as we also accept what the legal form of thought offers us.

What do we bring to our incarnate presence to one another? It cannot be that all we *are* is our genetic code, which the systems of the world then act on and respond to in producing our changing form through life. If we were or even actually thought we were the product however unique of just two factors—systems internal and systems external—we could not begin to understand the world of our observation. Nor could we begin to understand our action in it. For purposes of your or my or anyone else's action or restraint, you and I would not be distinguishable at base from any nonliving thing—the pebble in the stream whose internal systems have interacted with Nature around to give it its history and absolutely unique present form. We smash and scorch a pebble. We hesitate before doing this to each other for any reason, or indeed now to sentient animals. And I will note here what Raymond Tallis neatly reminds us,¹ that it does not do to say the internal systems of a pebble are not “complex.” They are, whenever we want to see them as such. In any event, complexity however it is conceived, appealing to the competitive and the puzzle-solving in us, is not the reason why we hesitate to smash and burn.

This which we instinctively sense or consciously perceive as part of the reality of our world is sometimes referred to as “dignity,” especially in law. It has its analog in the case of some animals, which is included in references to a creature's “sentience,” also a legal term.² Efforts to “explain” human dignity in terms of our current perception of organic evolution and its mechanisms are widely publicized and talked about, and learned in school. For those in academic life, these efforts are recognizable as academic exercises in the pejorative sense of “academic,” playing a game within some set of rules. The pressing question is not how to explain human dignity in this way, but rather the reverse, how to understand our perception of organic evolution, understand the fascination with it that I confess I have and so many others do, and my own persuasion to it and that of so many others, while staying realistic and acknowledging our actual presence to one another—the mutual trust and recognition of each other as individuals on which we build any kind of belief about the world. The question for the thinking person is not even what is scientific. “Scientific” should be an honorific term. The question is what is empirically the case, what the facts are.

In any field of work that leads to a truth or reality to which we are in fact persuaded, and with which we have to reckon in building our own belief about

¹ RAYMOND TALLIS, *WHY THE MIND IS NOT A COMPUTER: A POCKET LEXICON OF NEUROMYTHOLOGY* 45 (Imprint Academic 2004) (1994).

² *E.g.*, ME. REV. STAT. ANN. tit. 7 § 3907 (2001): “‘Animal’ means every living, sentient creature not a human being”; Treaty of Amsterdam, Protocol on Protection and Welfare of Animals, Nov. 10, 1997, 110 Eur. T.S. No. C340: “The high contracting parties, desiring to ensure improved protection and respect for the welfare of animals as sentient beings have agreed” On the legal use of “dignity” also with reference to animals, see Christopher McCrudden, *Human Dignity and Judicial Interpretation of Human Rights*, 19 EUR. J. INT’L L. 655, 708-709 (2008).

the world when we are being honest with ourselves, we begin with this recognition of ourselves and each other as individuals, the fact of it. This is the solid thing we begin with. All else has an element of creation in it, creation by our work. Or it may be said the truth or reality of all else we in some sense agree to, as we do not agree to our own existence except in the ultimate sense of refraining from acting in a lethal way to see what happens.

From that beginning, we move to recognition and acceptance of dependence on one another, the fact of it, not just for bodily life but for what leads to the substance, the content, the detail if you will, of our own individual view of the world. This is the reality grounding the trust and deference that are in turn the precondition and the means to our understanding.

These realities, our existence, our individuality, and our dependence, come before and then continue to lie side-by-side with that further reality, public values (in the words of the day) that come to life beyond any of us individually, by which we identify ourselves to each other with names other than our individual names. These living values bring us together—these and their source. They are part of the ancient and continuing reality of the vicarious in human experience. I suppose we will never stop arguing, despite hearing their call and identifying ourselves with them, about their source and the extent of our own responsibility for them. They bring us together, make us human in our own and others' eyes, and humane when we act. Both high achievement and daily mundane experience are a miraculous fusion-in-combination of our individuality, our place each at the center of the universe, and our participation as persons in a universe of many individuals.

II. Evolutionary Biology

Look then at evolutionary biology which is now often thought to be one of law's competitors. Evolution is not going away. Young minds will pick it up one way or another and will find it fascinating, whatever else they are contending with in coming to a sense of the truth of the world. The natural world and the living world are overwhelmingly wonderful and exciting. The elegance and simplicity of variation, adaptation, and relative survivability and reproduction grip the mind, like some of the things numbers do.

But very often when "evolution" is taught in schools and universities, or in public discussion, it comes with a great deal of cosmic freight, as part of a message that the universe is at base a cold, impersonal, purposeless process and that you and I, teachers as well as taught, are nothing of any special value. What did the great Jacques Monod say? "Living beings are chemical machines," and any postulates of purpose anywhere in the universe are "animisms" that "exist at

odds with objective knowledge, face away from truth, and are strangers and fundamentally *hostile* to science.”³

Consider those multisyllabic but not so technical terms “naturalism,” “methodological,” and “metaphysical.” They roll out from where I think we all start when we come into the world for the fifty or ninety years we have in it. We are constantly trying to put together the bits and pieces of experience we have, sort out what is real from what is illusory, and come to what we call understanding and what we can believe and have faith is real or true, about ourselves individually, about others, and about the world.

“Naturalism” is initially offered to us as a help. It proceeds from the presupposition or proposition or faith that parts of the world are orderly, stable, and predictable and, since predictable, possibly manipulatable. “Naturalism” joins that instinct about their order and stability and predictability to a possible method for getting at them. That method involves among other things deliberately excluding from consideration any purpose or spirit in or behind these parts or aspects of the world, and then seeing how far one can go in working with them.

“Naturalism” co-ops the word “nature.” “Nature” could mean “essence” or it could mean the universe as a whole including us who are full of purpose. Here it is made to mean the exclusion or “bracketing” of spirit and purpose, for the good reason that it allows the pursuit of a method which as it turns out is very successful (for many of us) in uncovering order within order within order. So we are taught, as a help to us individually and as a help in helping each other, what is called “methodological naturalism.”

But when those of us who work with this method become excited by how powerful and productive it is, with airplanes, atom bombs, and antibiotics there to show, some number of individuals, more today perhaps than ever before, say and try to persuade others of us that this method is the only way to truth and reality, and that the presuppositions of the method, particularly about spirit and purpose, are “true” rather than what they are, limiting assumptions to be made by us for the purpose of seeing what happens if we work with some parts of our experience on that basis. In these urgings the method ceases to be based on assumptions: people using the method present themselves as believing that the assumptions are true and any evidence to the contrary is illusion.

And so naturalism, focusing on the systems and the processes inside us and outside us that we think can be described, predicted, and manipulated, becomes an assertion about the whole world, or, as the philosophical term is, “metaphysical.” Those who call themselves “naturalists” shift from talking about a useful method, purposefully used, to talking about substance, about what exists

³ JACQUES MONOD, CHANCE AND NECESSITY: AN ESSAY ON THE NATURAL PHILOSOPHY OF MODERN BIOLOGY 45, 171 (Austryn Wainhouse trans., 1971) (emphasis in original).

and what does not exist, what is real and what is not real, what can be true and what cannot. We have not the "methodological naturalism" we had before but "metaphysical naturalism." Anything in the evidence the world presents to us that is ruled out by the method is not a something-more that needs to be understood too, but is ruled out of existence, as untrue.

Darwin, in whom evolutionary biology is personified, gets caught up in this with his "one long argument"⁴ about how to understand the similarities and the differences among "kinds" of animals and between "ourselves" as a kind and animals as kinds, evidence of which similarities and differences is all around us asking to be understood. Taking into account the emerging fossil record, which is also there to see, and now evidence at the molecular level, Darwin and his successors set out to persuade people generally that similarities are a result of common ancestry running through eons of time, the eye, the hand, neural tissue, hemoglobin and on and on being alike because of shared starting points. I should note though, with regard to similarities, that understanding similarity in evolutionary terms in this way is being supplemented within evolutionary biology itself in response to evidence that similarity could also be from what is called convergence,⁵ multiple beginnings and paths ending in the same result.

On the matter of differences, here we are—you and I—within a "kind" in current evolutionary perception, but there are differences between us that do not appear in that perception. For those differences between us that do appear and for the kind of differences that are between currently perceived kinds, humans differing from primates, primates from birds, red birds from blue birds, Darwin proposed a mechanism that would work without any unseen directing hand, without spirit striving or any inner desire to change into something different and better, and which therefore could be pulled under the umbrella of "methodological naturalism" that by definition excluded spirit and purpose.

The proposal was that inside each living thing is a "diversity generator" that we usually now conceive to be the DNA molecule, which randomly produces changes in the physical organization of units of life taking their temporary place in the world. "Mutations," as they are called, are random—the changes appear by chance. One or another change may then be selected in a mechanical way according to whether it makes a unit better adapted than its competitors to survive in the environment in which they happen to find themselves and to

⁴ This was Darwin's own characterization of his *The Origin of Species*. See CHARLES DARWIN, *ON THE ORIGIN OF SPECIES BY MEANS OF NATURAL SELECTION, OR THE PRESERVATION OF FAVOURED RACES IN THE STRUGGLE FOR LIFE* 362 (Barnes & Noble Classics 2004) (1859) (hereinafter *THE ORIGIN OF SPECIES*).

⁵ In SIMON CONWAY MORRIS, *LIFE'S SOLUTION: INEVITABLE HUMANS IN A LONELY UNIVERSE* (2003), Simon Conway Morris, the principal student of the Burgess Shale fossil record of the "Cambrian explosion," explores the evidence for convergence and its place in evolutionary biology and the vision of things past and future represented there. See also Simon Conway Morris's review of current work for the Royal Society's 350th Anniversary, *Evolution: Like any Other Science It is Predictable*, 365 *PHIL. TRANS. R. SOC. B.*, 133, 133-45 (2010); SIMON CONWAY MORRIS, *THE CRUCIBLE OF CREATION: THE BURGESS SHALE AND THE RISE OF ANIMALS* (1998).

reproduce the change in successors. Successors carrying the change and continuing to be advantaged by it leave comparatively more successors, their competitors not so adapted to survive and reproduce leave fewer, generation by generation.

The overall evolutionary process continues, of random change in units here, there, competition for limited resources, and differential reproduction, with another change in what ends up being in the world, and then another, and then another, until arrival at the shapes and sizes, systems and processes, presented to us as *faits accomplis* when we individually open our eyes on the world around us during our time on earth. Then soon, in each of our lives, the particularities of what we meet at birth are organized for one purpose or another by and for us into kinds, or types, or associated with kinds or types.

This was called "natural selection," or "variation and adaptation."⁶ Understanding the way the mechanism works is more complicated now, and there is unease within the community of professional biologists and professional observers of biologists' work about the evolution of their own understanding.⁷ But large numbers of inquiring people who come in contact with the basic thought and put it against the evidence for it and see the way it makes sense of the evidence for it, are persuaded and come to believe that it is a true insight. Those who do not work directly on natural selection and who come to accept it as a true insight do so very much on the basis of the authority of their teachers and trust in those who do work with it. This is the case whoever they are, scientist or non-scientist, though I should say that even those who work directly

⁶ An excellent summary can be found in George Levine's "Introduction" to the Barnes and Noble Classics 2004 edition of *THE ORIGIN OF SPECIES*, v-xxiv. See also George Levine's treatment of the reception of natural selection, and its implications, in *GEORGE LEVINE, DYING TO KNOW: SCIENTIFIC EPISTEMOLOGY AND NARRATIVE IN VICTORIAN ENGLAND 280-83* (2002).

⁷ A deliberately provocative but accessible and broad ranging introduction to current questions about the causal mechanisms involved was published as this essay went to press. See JERRY FODOR & MASSIMO PIATTELLI-PALMARINI, *WHAT DARWIN GOT WRONG* (2010). The survey undertaken there should be read together with the varying critical responses that it produced, the variation in them being itself useful to see. *E.g.*, Peter Godfrey-Smith, *What Got Eaten*, *LONDON REV. BOOKS*, July 8, 2010, at 29; Jerry Fodor & Massimo Piattelli-Palmarini, Letters, *What Darwin Got Wrong*, *LONDON REV. BOOKS*, July 22, 2010, at 4 (replying to Godfrey-Smith's book review); Peter Godfrey-Smith, Letters, *What Darwin Got Wrong*, *LONDON REV. BOOKS*, August 5, 2010, at 4 (responding to Fodor and Piattelli-Palmarini's reply to his review); Mary Midgley, *A Sting in Evolution's Tail*, *THE GUARDIAN*, Feb. 6, 2010, at 7; Richard Lewontin, *Not So Natural Selection*, *N.Y. REV. BOOKS*, May 27, 2010, at 34; Ned Block & Philip Kitcher, *Misunderstanding Darwin: Natural Selection's Secular Critics Get It Wrong*, *BOSTON REV.*, March/April 2010, at 29; "Misunderstanding Darwin": An Exchange, *BOSTON REV.*, Mar. 17, 2010, http://bostonreview.net/BR35.2/darwin_exchange.php (last visited May 24, 2011) (where Fodor and Piattelli-Palmarini reply to Block and Kitcher's review and Block and Kitcher respond); Samir Okasha, *Whites and Blues: New Objections to the Theory of Evolution . . .*, *TIMES LITERARY SUPP.*, Mar. 26, 2010, at 3; Jerry Fodor & Massimo Piattelli-Palmarini, Letters, *The Theory of Natural Selection*, *TIMES LITERARY SUPP.*, Apr. 28, 2010, at 6 (replying to Okasha's book review). In JERRY FODOR & MASSIMO PIATTELLI-PALMARINI, *WHAT DARWIN GOT WRONG* readers will note the careful and personal way in which Fodor and Piattelli-Palmarini state their "terms of engagement," what they themselves want to be, what they claim to be, and what they seek, and the nature of the "commitment" to "naturalism" which they take to be the "common ground" of those engaged in the discussion (see xiii, xv). Each reader will judge in the case of each of the discussants, including Fodor and Piattelli-Palmarini, whether such self-characterizations as they may offer are maintained throughout what they say.

with the current conception of “natural selection” depend upon one another for any full understanding of the thought and evidence behind it.

What happens then so often, however, is again a move to make a statement about the whole world and all individuals’ experience of it. The same move can be seen made by those who work in current evolutionary biology and by those who learn from them. Whatever anyone may experience, if it does not fit this way of understanding many of the facts of the world, it is said not to exist. It is illusion, not real. What exists today is said to be a product of this mechanism. Moreover, nothing has any more claim to continued existence than the systems that have disappeared except for their fossil traces. Above all there is no such thing as purpose, which was first ruled out from the method of understanding and now is ruled out as anything that needs to be understood. The implications of doing so are sometimes drawn out and dwelt upon as if positively desired. There is no larger meaning, there is no living value, nothing is better or worse.

This is the challenge of “metaphysical naturalism” in the particular form it takes in evolutionary biology, now so prominent, and is what makes current evolutionary biology, in many of its public presentations, one of law’s competitors. But here, unlike discussions of black holes or the Big Bang, individuals making statements of this kind are talking about us and things we and others know something about. So, when someone identifying himself or herself as an evolutionary biologist speaks of love, as some do, the response is available, for anyone who wishes to respond, that this person speaking is simply not talking about love, or, more pointedly, does not know what he or she is talking about.

The same is true of statements made in these terms about language whose meaning is a person’s meaning, true of statements made about the individual, or made about responsible action, or horror, or suffering, or good faith, or trust, or persuasion and assent, or respect. Or humor—imagine someone whipping out a definition of the humorous, declaring what was humorous and what was not, and proceeding to instruct you on the matter.

When these parts of our experience are reached and assertions are made about them, it can be seen or eventually concluded that people are talking about something else or that all in all they do not really believe what they are saying, or, just perhaps, that their perception is impaired and experience limited. Indeed, as we shall note again in a moment, mathematicians recognized as mathematicians by each other and by us say that natural selection as a “theory of everything” does not reach and cannot explain mathematics, which is not, in itself, reducible to the organization of neural tissue, but is real in a realm of its own and there to be discovered.

I do not say these things as an entry into argument over evolution as such, what it is, how it proceeds, where it or conception of it can go. I admire Darwin’s work and always have—my first degree was in zoology—and I admire work his

insight has generated. I say these things rather as a matter of reporting, of fact, or offer of fact. Total theorists in current biology simply do not touch much of what they purport to be talking about. There is no threat in it really, no need to fear or wonder whether you really exist. You do. That may be someone else's problem, but it is not yours. As one of my favorite poets, Mark Halliday, wrote of what is said by a hotelier's twinkle while taking small things seriously,

It was a twinkle that said:

'It is true we have a strange infinity within us;
my own is darkly strange; but we have to live
in the physical world of shops, onions, coal, beef, . . .'⁸

Total theorists do not touch what they purport to be talking about, not because they have not yet touched and need only time before they do, but rather because, again, we are individuals, and are different from one another. There is the same uncrossed gulf between the world of the novel, poem, or prayer, and general talk of "properties" or "emergent properties" in a world definable outside a living relationship of mutual understanding and mutual assent. A poem, after all, is an experiment too, but it is experimenting with what other kinds of experimentation kill before they touch.

Take any sentence of a total theorist reaching as far as she or he knows how—this reference by one, for instance, to "cognitive and emotional features specific to humans—artistic ability, rationality, religiosity" that an "expanded evolutionary framework" can eventually "account for."⁹ Do her words "artistic ability, rationality, religiosity" touch your sense of art, your sense of reason, your sense of the divine? That is for you to say, you to decide, taking all in all into account, including any inclination to true deference you may have in you. You will also know the degree to which your agreement or disagreement, your assent or withholding of it, your acceptance or not of what is being said on these matters is authentic or inauthentic. It will come out in one way or another, to be seen by yourself and noticed by others.

When biologists today speak about human things—art, reason, religion, justice, fairness—the situation in its bearing on our lives and what it demands of us is not substantially different from our situation in law. The question of the meaning of a word in a sentence, and the question who is to decide its meaning and with what authority and consequence, do not disappear when individuals who speak identify themselves as evolutionary biologists. What we, individuals, are called upon to do is not different from what we all do every day in the

⁸ Mark Halliday, *Olivier Bergmann*, in MARK HALLIDAY, JAB 15 (2002).

⁹ Eva Jablonka, *Yes, but . . .*, in DOES EVOLUTION EXPLAIN HUMAN NATURE? 39 (2009). For further illustration, and as an easily accessible exercise, trace the presuppositions and consider the proposed meanings of such terms as "justice" or "love" in what is said in Frans de Waal, *Obviously, Says the Monkey*, or Robert Wright, *Yes, in DOES EVOLUTION EXPLAIN HUMAN NATURE?* 4-7, 129-32 (2009).

analysis, interpretation, and administration of law. This is why the legal form of thought is not only pertinent to an assessment of the truth of what evolutionary biologists say, but is implicit in the very structure of their own field. Each biologist is familiar with making up his own mind when other biologists speak to him, deciding upon the meaning of words and sentences he hears and deciding when and why to defer, and he has only to imagine himself in the place of those to whom he is speaking on human matters, and who are beyond his colleagues, to understand how he must necessarily be heard.

I think this same limitation founded in our individuality and our difference extends to the sentient animals that are often at the center of biological investigation. Sentient animals too may be individuals and different from one another. The great virtue of the scientific mentality which balances the tendency in it to overstatement—its underlying open-mindedness and organized concentration upon the evidence—is increasingly bringing biologists themselves to recognize individuality in animals. The degree to which creatures you and I call “human” differ from some animals we call “sentient,” over a range of experiences, from love and loyalty to language and purposefulness, is more and more open to question.

This is something judges, juries, and legislators have observed for a very long time in developing the corpus of “animal law” since the early nineteenth century. “Sentience” as generally used in professional scientific or indeed philosophical work thins and flattens human experience with animals, treating “sentience” as if it were a “property” or “emergent property” of an object. Again, “sentience” is a legal term in the United States and in Europe, and I rather think it is not natural scientists as such, loyal to their use of the term, who will place animal sentience in a general vision of the world but lawyers who are more generally attuned to the individual.

It actually helps that animals are now on our side, rather than our being alone, exceptions from or additions to a world without mind or meaning, trust or hope, openness or respect, generosity or concern, without, in a word, the holy in it. That animals are increasingly on our side also isolates even more the methodological axioms of “naturalism” from the overall sense of the nature of the world we actually teach and are actually taught. Who is to say now how far our understanding of animal perception, communication, sociality, music, or inner life may take us? Unfolding awareness of the sentience of animals and their connection with the human may leave the human “us” holding as our special distinction a special responsibility for what happens to the world. We do not lessen amazement at or deference to or gratitude for the capacities we experience in ourselves or sense in others of “us,” if we acknowledge that we do not know the limits to our capacity to understand the capacities of the sentient world around us, either relationally or at arms length.

If we stay open we cannot say we know even what animals' relationship is with the divine. From concern for the ox to concern for the sparrow Scripture suggests there is one. The first covenant is with the animals too. Genesis links them with concern for us, that we not be alone. They can see angels when we cannot. Animals are there on the holy mountain and are there singing at the end of time.¹⁰

Note too that the question of what in us resembles what we see now in animals is also a question of what makes us human. Evolutionary biologists in general seem most confident of having in themselves the ability to tell whether another individual is human, one of "us," the human "us." My own view is that insofar as evolutionary biologists rule out responsibility generally—either individual responsibility or supra-individual responsibility—they are rather at sea in the looking back we and they do at evidence of the evolution of the human—that is, those individuals present on earth around whom is drawn the circle of a "we" and an "us." Experimentation on human individuals before birth as if they were animals, and hybridization of various kinds between humans and animals, are only two of the situations in which the question "What is human?" becomes a stark and pressing one.

There is a further limitation on how far naturalism can go in light of the fact of our individuality, and, now, the acknowledged individuality of some animals. It is a limitation associated with the substantive gulf between reality and what is grasped for in current biological discussion. Insofar as work toward the truth of things is dependent on experiments on living individuals there may well come a progressive tightening of legal limitation on it, and on repetition and verification by repetition of previous experiments.

There are already limits on research on human beings without their consent, some limits on research on human beings with their consent, and growing doubt about the quality or even the possibility of adequate consent that would distinguish the risk-taking experimenter from the manslaughterer characterized as such in statute by his "disregard" of the "value of human life"—which has always meant the value of an individual human life rather than the existence of the human species.

In the two situations I have just noted that newly put the question of human identity, there is increasing legal concern about experimentation on a developing human individual, reaching back to the fourteenth day of development, which would be as much without consent as experimentation on a child after birth. The concern is discussed and acted upon largely apart from concern for the personal autonomy of women in the legal treatment of abortion. Then moving in the other direction, there is active concern about experimenting from the fourteenth day

¹⁰ See *Exodus* 20:10; *Matthew* 10:29; *Genesis* 9:10,12,15,16; *Genesis* 2:18-19; *Numbers* 22:23-33; *Isaiah* 11:6-9; *Revelation* 5:8-13.

forward on creatures that are hybrids of the human—defined as human in some way—and the animal.¹¹

Already primates are protected against experimentation in some jurisdictions.¹² Just as convicts, the poor, the mentally disabled, children, and members of the military have been gradually withdrawn from the pool of human subjects available for risky experimentation, animals may be withdrawn species by species as a grounded sense of their individuality and the connection between their individuality and our own develops and spreads—develops and spreads, in fact, through the teaching and understanding of evolutionary biology. Risky experimentation even to determine the extent of the generalization possible from a sample of some but not all of a group would be affected as much as any other.

This is a limit and it is also a convergence of forms of thought, the scientific and the legal, to which I pointed in the last chapter of *The Song Sparrow and the Child*.¹³ Individuality is marked by recognition that there are some things you do not do regardless of general gain hoped for. It affects action and restraint of action, and action and restraint of action ultimately affect thought.

Move now from the substance of experience, in evaluating metaphysical naturalism in its evolutionary form, to reason's desire for some consistency in others' statements as well as in one's own. It is precisely because there is more than one of us, and we are different, that any proposal threatens itself when it eliminates us as individuals and as minds creating, proposing, doubting, persuading, trusting, believing, sitting in judgment on proposals and responsibly accepting them or not as true insights. The more total and complete a proposal is or pretends to be, the more remote it is from even the possibility of acceptance as truth. However the vision of natural selection is said to exist—in written characters of a language, in thought floating above or uniting more than one individual (never all individuals, we may note), or in patterns of cellular connections—it itself becomes subject to its own explanation, as an adaptation to its environment that need not last, not better or worse than any other phenomenon, here now, gone later with a change in the environment or the inner systems of whatever is conceived as a reproducing unit.

Darwin actually saw this. “[W]ith me,” he wrote, “the horrid doubt always arises whether the convictions of man's mind, which has been developed from the mind of the lower animals, are of any value or at all trustworthy.”¹⁴ His own

¹¹ See discussion and references in Joseph Vining, *Human Identity: The Question Presented by Human-Animal Hybridization*, 1 STAN. J. ANIMAL L. POL'Y 50, 57-61 (2008).

¹² E.g., Animal Welfare Act 1999, 1999 S.N.Z. No. 142 (“restrictions on use of non-human hominids”); Alison Abbott, *Swiss Court Bans Work on Macaque Brains*, 453 NATURE 833 (2008).

¹³ JOSEPH VINING, *THE SONG SPARROW AND THE CHILD: CLAIMS OF SCIENCE AND HUMANITY* 133-52 (2004).

¹⁴ 1 THE LIFE AND LETTERS OF CHARLES DARWIN 285 (Francis Darwin ed., 1919). See GEORGE LEVINE, *DARWIN AND THE NOVELISTS: PATTERNS OF SCIENCE IN VICTORIAN FICTION* 235-37, 271-72 (1988). For an introduction to further discussion

insight into the evolution of systems and processes and its mechanisms was as much a candidate for this “horrid doubt” as any other sense we have about the truth of things to which we are persuaded and in which we believe. And in fact other scientific disciplines, just like mathematics, do not like to be seen as chance products selected to survive for a moment in history before passing away. They seek truth, just as we all do.

Evolution is a form of history, an account of the past given today and based upon what evidence of the past has been left to us today. But the history of evolution itself, and of biology, is not part of the history of the world that is presented in telling of the story of evolution. The history of evolutionary biology is part of the history of mankind, and as such, is infused with all human experience, of purpose, and spirit, and individuality, and kinship with a sentient world. If evolution is ever to be truly a history of the world it must acknowledge these, and interestingly, acknowledging this last, our actual experience of kinship with the sentient world, may involve recognition that joy, music, communication beyond signaling, even purpose itself, may have been in the world without us being in the world. It may have been before us in our predecessors (depending on how we identify “us” and our difference from our predecessors) and in other animate existences with and before them.

Thus we can continue to talk about meaning, the value of the individual, persons who transcend individuals, spirit, sentience, purposes of our own or others and purpose beyond us, confident that we are talking about the reality of the world on the basis of our experience in it and not just engaging in fantasy and illusion. We can doubt any or all of them, and of course we do from time to time and we have varying degrees of faith or belief in them. But the reason for doubt would not be any total claim made by individuals working with Darwin’s insight to understand this world we spend our few decades in.

The more robust the sense of yourself and your own existence or reality you have, the easier I think it is to see this. By a “sense of yourself and your own existence or reality” I mean to take you to what James Boyd White speaks of as the very “center of our being,” “what we are” that is “not dependent upon being seen and recognized by others.”¹⁵ With age comes experience of one’s own mind as a companion, experience of listening to one’s own mind, being surprised by one’s own mind. Recall sleeping on a problem and on waking having a way into it presented to you. Recall words, sentences, lines of poetry, to express (or express acceptably enough) what you seek to express, falling into place and being presented to you. Presented to whom, spoken to whom? Listened to by whom, selected or not or accepted and acted upon or not accepted, by whom? “Why, that is me,” I think you might say. However imprisoned, disappointed, or

see Stephen R. L. Clark, *In our grasp*, TIMES LITERARY SUPP., Oct. 14, 2005, at 11-12 (reviewing works by Raymond Tallis, *THE HAND* (2003), *I AM* (2004), and *THE KNOWING ANIMAL* (2004)).

¹⁵ JAMES BOYD WHITE, *CONNECTING THE GOSPEL: TEXTS, SERMONS, COMMENTARIES* 119, 206 (2010).

betrayed by your body or by your mind or emotion, you are there, at the center. I wonder whether you would not report as I would that the center of our being, which from some early point in our development and experience does not seem to age, stands outside time, at least that kind of time marked in trees' and bodies' changes and the births and deaths taking place all around us.

We may not be unitary at the center except in the sense that the Trinity is unitary. If there is a paradox at the center, recall that the person, arising from all the evidence in speech and action, is constructed by us on the presupposition that there is the possibility of authenticity, a connection to a reality. In particular cases, tragically if it is a sense of ourselves that is at stake, we may give up trying and turn away. But we do not give up the presupposition of the possibility of authenticity without giving up life. Paradox alone is not enough to make us give up or turn away. As Kierkegaard famously said, "Take away the paradox from a thinker, and you have a professor,"¹⁶ and with that warning, you and I especially would want to sit with the facts, paradoxical or not.

I think we can start with these ordinary experiences in our observation of what is not touched by proposals about organic evolution, even when we are well persuaded to give our assent to this way of seeing those things they do touch. Each of us lives pragmatically, specialist as much as non-specialist, with paradox if need be to stay as close as possible to the truth of things as we actually see them, but living no less fully because there is paradox in our understanding.

There can of course be imagined a proposal that there is no one at all at the very center of our being. To these questions with which we live, and die, "no one" are words occasionally heard said as if in answer. With regard to that position, I could hardly refer to "those who propose it." To listen to them, hear them at all, we would have to overlook not only what they are saying about us, who are meant to hear it, but what they are saying about themselves. I can only appeal to your own sense of yourself, and then point to the outline of what is protected in law. Certainly in law we would not delegate questions so important to us all to be decided by those reading the texts organizing discussion in professional philosophy or those professionally engaged in working with the limiting presuppositions of scientific investigation.¹⁷

¹⁶ SOREN KIERKEGAARD, *JOURNALS AND NOTEBOOKS*, in *THE KIERKEGAARD READER* 22 (Jane Chamberlain & Jonathan Rée eds., 2001). One of the most graceful acknowledgments of paradox is that of G. Evelyn Hutchinson, a founder of scientific ecology, in G. EVELYN HUTCHINSON, *THE KINDLY FRUITS OF THE EARTH: RECOLLECTIONS OF AN EMBRYO ECOLOGIST* 79-80 (1979). For an informed, eloquent, and comprehensive exploration of the possibilities for resolution, see STEPHEN R. L. CLARK, *BIOLOGY AND CHRISTIAN ETHICS* (2000).

¹⁷ Some may also say "there is no such thing as the human." But they would still be, to those who hear them, particular human beings to be understood in what they say as whole persons—in the way we finally understand what anyone is trying to tell us, by seeing and hearing him or her as a whole person. They are as human—fellow creatures—when they say "there is no such thing as the human" as they are when they appeal to our experience and say what they think the human is. The situation is not different when we hear, as we do, one or another of us making categorical statements along similar lines, such as "there is no such thing as the divine" or "there is no connection between our consciousness and animal sentience," or even "there is no such thing as animate life ultimately distinguishable from inorganic processes."

My reference to the very center of our being as also, for each of us, the center of the universe, does require more in the way of discussion. The modest among us or the modest in us may say "How can I be the center of the universe?" But that is the fact of it. You are. You are the only one living your life. The universe is your universe. The universe is as you actually see it and not otherwise. Indeed you can only surmise that you will not take the universe with you when you die. Your faith in the continued existence of the universe beyond your death is not different from your faith in other matters, including, as may be, your own existence beyond death.

And yet you know there are others like you in this universe of yours. This is one of those numerous strangenesses about your world and my world, like the food chain built into the world along with sentience, like creativity including your own built into it along with predictability, like aging, like boredom.

Again I would note that whenever individuals making the total claims of evolutionary biology genuinely respect the dignity of other individuals in their personal life, which they do, they demonstrate that whatever they may say professionally, they do not believe in the total reach of a scientific view of the world that has no place whatever for the dignity of the individual. Partisans in the struggle to make other people look at the evidence they are looking at—the fossil record, the similarities between humans and animals—have said strong things. Now there is an equivalent struggle to make partisans look at evidence and carry through with the empirical in them.

III. Mathematics

Let us turn to mathematics as a second example of what it means for a vision of the universe that there is more than one of us living and that we are different.

The large majority of human individuals would likely say that high mathematical ability is a gift they do not have. The large majority of voters would think this as would the large majority of those making decisions, private or public, on the allocation of money and of relief from unwanted work. Mathematicians themselves are not modest about it. They too see theirs as a special and differentiating gift. They look for it among the young.

Gift and difference may perhaps most easily be conceded to the mathematicians among us. But of course, as there can be esoteric knowledge—esoteric in the sense of not wholly and fully shared by all and perhaps shared only by a few and then unequally—so can there be esoteric ignorance. Acknowledging gifts in others that one does not think one has is surely not to say that one would have nothing in the way of knowledge or understanding of the world to give them oneself, and I doubt it would be said in the end in anyone's heart after experience and reflection. Over and under differences and gifts

generally, and acceptance of ignorance or challenge to a claim of ignorance, flickers the necessity of assent.

We can look within the profession itself to see mathematicians facing the necessity of assent that others face. “Realists” among mathematicians, perceiving and believing in their perception of a transcendent mathematical reality, often present what I have called elsewhere a total picture, a complete picture. To a neurobiologist seeking to persuade him to the neurobiologist’s own complete picture of mathematics as a neurobiological phenomenon produced by natural selection, a prominent French mathematician, Alain Connes, replies “[y]ou conceive of my external mathematical reality as a part of the external physical world. For me, it’s just the opposite: external physical reality is a part of archaic mathematical reality.” Mathematical reality, he insists, is elemental. It is “a reality that I believe exists independently of our Darwinian world, whose coherence and harmony are the very opposite of randomness.”¹⁸ Connes reflects the view of a large number of mathematicians today and in the history of mathematics. G. H. Hardy had said in his well-known *A Mathematician’s Apology*, speaking of mathematics and physics as Connes speaks here of mathematics and biology, that the most important difference between mathematician and physicist “seems to me to be this, that the mathematician is in much more direct contact with reality.”¹⁹ The lucid and open-minded first chapter of Roger Penrose’s *The Road to Reality*²⁰ is I think the most accessible summation of the positions taken by realist mathematicians and their further cosmological conclusion they often put forward, that mathematical reality governs or contains all there is, the universe.

Even a non-mathematician can observe that assurance of such a cosmology is not a matter of direct contact. The experience of “archaic mathematical reality” itself may be direct, but the confidence that drives the urging of its completeness, the satisfaction in its totality that can be displayed, rests upon a sense of mathematics as a whole—this is what allows an individual to think of “it” as a world and reality itself. That sense rests upon the testimony of others, no matter how fine and comprehensive the mathematician may be at the peak of his or her powers. In that part of mathematics, which is a mathematician’s own, there is also a dependence upon at least some confirmation, some assent from others. Think of well-publicized story of the announcement, an individual’s

¹⁸ JEAN-PIERRE CHANGEUX AND ALAIN CONNES, CONVERSATIONS ON MIND, MATTER, AND MATHEMATICS, 116, 206 (M. B. DeBevoise ed. and trans., 1995) (hereinafter CONVERSATIONS). For a well-known view from an earlier generation, see Eugene Wigner, *The Unreasonable Effectiveness of Mathematics in the Natural Sciences*, in 13 COMM. IN PURE AND APPLIED MATHEMATICS 1, 3, 5, 12, 13-14 (1960).

¹⁹ G. H. HARDY, *A MATHEMATICIAN’S APOLOGY* (foreword by C. P. Snow) 128 (Cambridge Univ. Press 1982) (1940) [hereinafter APOLOGY].

²⁰ ROGER PENROSE, *THE ROAD TO REALITY: A COMPLETE GUIDE TO THE LAWS OF THE UNIVERSE* 12-24 (2005).

announcement, made to the world, of a proof of Fermat's last theorem, the questions raised about his proof, and his return to the attic to continue work.²¹

Dependence of this kind has nothing to do with passivity, and as Alasdair MacIntyre has so beautifully explored it in another setting²² dependence is not the obverse of dominance in a relationship. There is action and responsibility in choosing what dissent to reject and what dissent to accept. Nothing is automatic about it. The decision is an individual one, as is the decision to go on to choose what assent is sufficient—in the face of dissent—to satisfy and fortify to the point of belief. Just one person saying “yes” is sometimes enough if he or she is such a one in the estimation and judgment of the one thus happily confirmed. The contrary choice is always possible, that others’ assent is still insufficient to satisfy and fortify, either in numbers of independent and responsible minds, or in *who* it is who confirms. This extends to any human experience.

Then, beyond the mathematician's own field and beyond mathematics as a whole, is the cosmological assertion we see put forward, of the completeness or totality of “mathematical reality,” entirely encompassing “external physical reality” and all that is in human experience. Cosmology generally depends upon the support of others. Perception of a reality is perception of *a* reality in a world that is puzzling. To go further and say to oneself and urge on others that it is *the* reality, absorbing or reducing to a derivative state or banishing to the outer darkness of “illusion” all other reality that is said to be perceived, is not usually done alone, but depends upon others and then upon one's judgment of others.

We cannot say cosmology must depend upon the testimony and confirmation of others. It is a vision, of the nature of the world as a whole. But this vision in particular, the mathematical, is the product of discussion and refers to discussion. If it is a vision presented to others and is not to be of the order “the whole world is made of green cheese,” it has to be seen by others as something more than a lonely vision, even before someone listening to it tackles the task of piecing together what is said with all else that is said about the world by the person urging the vision and said about himself too as he speaks about his vision. This is not a matter of strategic necessity, obtaining a majority sufficiently large to impose upon a minority by force. Human assent, authentic assent free and beyond manipulation, is simply part of the mathematician's world as it is also part of the world of the evolutionary biologist, a grace in it affecting him or her though there may be no conscious or immediate awareness of it.

In the same way trust, which is overtly built into legal method, is there though hidden in scientific method itself. There is certainly no divide between legal method and mathematical or scientific method in being able to “see for yourself”

²¹ See, e.g., AMIR D. ACZEL, *FERMAT'S LAST THEOREM: UNLOCKING THE SECRET OF AN ANCIENT MATHEMATICAL PROBLEM* 127-34 (1996).

²² ALASDAIR MACINTYRE, *DEPENDENT RATIONAL ANIMALS: WHY HUMAN BEINGS NEED THE VIRTUES* (1999).

in mathematics and science what it is you know and are willing to act upon. The time and capacities you have do not allow it.

We have been speaking principally of the “realists” and “Platonists” among mathematicians who recognize one another as mathematicians. But there are to be found also among recognized mathematicians those who call themselves or are called “constructivists” and “finitists.”²³ The two groups, “realist” and “constructivist,” might quarrel about how opposed they are or how much their differences matter to what they do with their lives. But “constructivists” emphasize mathematics’ human source and see the mathematician fused with mathematics.

“Constructivists” may well go on and, for their own part, dissolve the mathematician into a world of pure process, a world which includes the operation of natural selection within it—that being their ultimate, total, or complete picture. But of course when they do so they meet physical law that loops back and is sought to be expressed by physicists ultimately through that very mathematics, which brings them again to the insistence, by other mathematicians, on a dimension of reality that transcends and encompasses this so-called and oft-called “material” world.

“Constructivist” mathematicians wish the transcendent were not there. They chafe at it, worry, scold, ridicule. But there it is, in the mouths of individuals whom they would admit to be mathematicians. Worse, constructivists do not stare blankly when the transcendent appears in the language and argument of others to whom they are paying the respect of trying to understand. They do not stare blankly, say their colleagues are speaking word salad as if after a stroke, view them as having a “deficit” as they—though not a priest or nun I think—might view those classed as retarded. They read G. H. Hardy’s *A Mathematician’s Apology* again:

[T]here is no sort of agreement about the nature of mathematical reality among either mathematicians or philosophers. Some hold that it is ‘mental’ and that in some sense we construct it, others that it is outside and independent of us. I should not wish to argue any of these questions here even if I were competent to do so I will state my own position dogmatically. I believe that mathematical reality lies outside us, that our function is to discover or *observe* it, and that the theorems which we prove, and which we describe grandiloquently as our ‘creations’, are simply our notes of our observations. [T]here is no mathematician so pure that he feels no interest at all in the physical world; but, in so far as he succumbs to this temptation, he will be abandoning his purely mathematical position 317 is a prime, not because we think so, or because our minds are shaped in one way rather than another, but *because it is so*, because mathematical reality is built that way. ²⁴

²³ See, e.g., BRIAN ROTMAN, *AD INFINITUM: THE GHOST IN TURING’S MACHINE: TAKING GOD OUT OF MATHEMATICS AND PUTTING THE BODY BACK IN* (1993); CONVERSATIONS, *supra* note 18, at 41-46.

²⁴ *APOLOGY*, *supra* note 19, at 123-124, 127-128, 130.

"Realist" mathematicians themselves also may wish to limit this opening in the "physical" world, limit the degree of difference between the transcendent world in which they believe on the basis of some direct experience of it, and the material and evolutionary world as it is treated by their colleagues.²⁵ They may limit the significance of the opening by emphasizing the coldness of this transcendent dimension they call mathematical, that there is in it nothing but form, that its motions, if there is motion in it, are circular, that it has nothing to do with living value, or purpose, or meaning associated with purpose and value.

"Realists" may thus align themselves with "constructivists" in their wishing to limit any opening in the physical world. But they testify to an opening. They therefore put "constructivist" mathematicians, who would want to admit no transcendent dimension of reality, to the necessity of picking and choosing within all they hear "realists" say as mathematicians. "Constructivists" cannot escape rejecting and accepting observations, testimonies, and expressions, and they cannot escape rejecting and accepting on bases other than those they might naturally want to use—neither "constructivists" nor "realists" count views, or attempt some statistical resolution of their differences. In facing what "realists" say about mathematics and coming to a contrary belief, and then in putting a belief forward as from the inside of mathematics, "constructivists" summon, indeed appeal to an identity which itself does not exist merely "materially."

"Constructivists" thus meet the necessity of introducing themselves—not just as products of biological evolution but individually choosing, judging, persuading and being persuaded—into their own picture of the world, and, again if they do not conceive themselves unique in every respect, they each introduce an identity beyond themselves as individuals. As they move more and more toward saying that theirs is the view of the "mathematician" or the view of the "serious mathematician," they invoke this identity more and more. It is identity of the kind indeed that might give them individual standing to make legal arguments in a court of law.

Then, they are not denying the person when they argue for or testify to or insist upon a cosmological belief. They are not denying what is not to be found in that cosmology of theirs but rather they are affirming it, intrinsically and quite aside from all else they may say in other situations in their lives. They are not denying person, or the individual, or spirit. *They* are there, to themselves and to others, and it is enough that they are there. With *them* comes dignity and respect, prizes received, silence in the auditorium.

And, if we go back from "constructivist" mathematicians to "realist" mathematicians and mathematical physicists who do see a place for the "nonmaterial" in the cosmos or world as a whole, but would limit it, there is the same to be noticed. They too have introduced themselves and joined with others

²⁵ See, e.g., CONVERSATIONS, *supra* note 18, at 26-28, 38.

beyond themselves. In arguing with their colleagues over the nature of mathematical and scientific truth to present to the rest of the human world, they too appeal to an identity that does not present, even to them, only the cold forms they would paint in their picture of the universe.

Something beyond mathematics appears with the world of mathematics in one further way. We cannot always keep in mind that we-who-are-many-more-than-one are always coming in ragged succession, individuals and persons new, minds fresh. We might rather not notice the fact. It involves death. But death has its consequences.

Mathematicians waking up as such well into their lives have an interest in what we call achieving, the source of which interest they may feel no need to examine. To a non-mathematician, their interest displays a caring and purpose which is not to be found in the mathematical world itself. Mathematicians who are "realists" might ask themselves and each other why they cared whether a human mind ultimately resonated with mathematical reality, if that added nothing to mathematical reality itself. Once truly and fully into belief in its ultimacy and comprehensiveness they might, if they fully and truly believed, be inclined to let reality take care of itself. They might be inclined not to argue so with their colleagues, mathematical or scientific, nor to appeal so to non-mathematicians.

The fact that they are interested is an indication to be read by others. The fact, as such, is there to be taken into account in understanding them in what they say about the nature of the world as a whole. But, given their own interest, there is more. In light of the further facts of their aging and death, they must attract attention if mathematics is to survive at all, much less progress. Most certainly they must find themselves a way to eat (while rightly celebrating the "uselessness" of mathematics). With respect to mathematics itself, they must attract attention to it to pass it on. If others, presently non-mathematicians, are not interested in mathematics, in learning it and in supporting the learning of it, mathematics as a human endeavor will lapse with the death of the mathematician. If the interest of others is not automatic, the homing in of an automaton on its destined task, if interest in mathematics is not a product of the workings of mathematics itself as an independent reality—if it were, there would be no need for concern—there is the question why be interested? The insouciant might say we can live without mathematics. We have before. Why turn attention to mathematics, away from or in addition to all to which attention does turn and might turn?

Mathematicians do answer. The reason they give is not a mathematical reason, but a human answer to a human question, presuming some human meaning and some choice including the choice how to live a life. In making this their appeal, not for the truth of their vision but for the value of pursuing it, the totality of the vision is broken once more.

Are their reasons not really believed in because there is no place for them in a total vision of the universe which has in it nothing but the mathematical? Are the reasons urged actually false for the mathematician urging them? They would be "seen through," through to the person that does not believe them, and the attention of the non-mathematicians and the young might wander. The use of the authority of law on behalf of mathematics might falter—the compulsory teaching of it, the testing of all and the penalizing of those who do not attend to it.

But if the reasons for pursuing mathematics are not false, and are believed, and by mathematicians, then one naturally wants some greater candor or, to put it more gently, some help, in understanding their statement of their sense of the nature of the world.

IV. Conclusion

The legal form of thought joins the mathematical and the biological in making sense of the world into which we are born. The world is not as naturalists present it to students coming into their own individual conception of the world, or as naturalists present it to us who already carry our own conceptions. The reason has to do with differences between you and me and among you, and, it now seems also, between you and me and animals and among animals. The reason is our individuality, which at least some animals may have also, and I mention them again to underline the question even of the nature of the so-called natural world, of which animals are most certainly a part. The legal form of thought is involved in making sense of Nature itself.

This difference, this individuality, is not easy to acknowledge or speak about, not today, but not in earlier times either. Speech itself is translation across our differences. Differences are of course bridged by assent, by agreement, by persuasion or mutual persuasion. But the fact, and it is a fact of the world, that another needs to agree with you and might not—or another needs you to agree with her and you might not—leaves behind a residue even after another agrees or you agree, which is the continuing presence of individuals and persons among the realities of the world. If among these various realities there are degrees of reality, our presence is the most real. Our presence is not unlike or indeed unconnected with theists' sense of the divine as a continuing source of existence itself.

The residue is potent. You know or believe something by reason of your observation and reflection, your agreement or assent. What you do not know is whether in the future you who may be outside time's sequence will change your mind, and as a consequence what you know or believe will change. The change, you may say, would be only in detail or in some quality, not in depth, if something of which you were truly convinced has already become an important part of your understanding of yourself and the world. But that would depend on

you and your experience of life. You, at the center of your being, are there, real to your mind, together with what is real to your mind because you are convinced it is. You may be admired simultaneously for both the accuracy of your perception and your open-mindedness. In this sense we participate in creativity at the most basic level, each one of us, or “half-creation” as Wordsworth so nicely put it.²⁶ There is a place for this in the legal form of thought, and its acknowledgment there is a final difference between the legal form of thought and its competitors in their current form, in which creation as such has no place whatever.

Therefore it is not the case that our life or the world around us is the product of chance and necessity, and we are only observers of it, naked consciousnesses.

But we are speaking of more than pictures, conceptions, senses of things. We are necessarily speaking also about how we live and act. The totalities now being widely presented and more than presented, pushed with partisan enthusiasm, are not and cannot be connected to whole persons and believing minds. But you to whom I speak, and those who have made this a part of their work in the world, obviously may disagree with me, and even if you or they did not, these totalities may continue to be pressed. Here numbers matter. Trying to make the sole source of grasping or understanding the world the insights of these current forms of thought, that purport to have no real place for the individual nor any place for the truly vicarious in human experience, can play out in the world even if it cannot succeed or last.

I cannot help but think that one of the ways it may play out is in the brutal fact of torture in the world, in human willingness or additional willingness to torture. I am not alone in this. Any who exclaim that it is scandalous even to suggest this only reveal their acknowledgment of the reality of the individual and therefore reveal too their lack of commitment to these forms of thought as sole sources of understanding.

We who lived through any good part of the twentieth century have seen much in the way of torture. The greatness of *1984*²⁷ lies in Orwell’s perception of what it is about torture that has made torture forbidden now in an absolute way, and his further and linked perception of the way the twentieth century totalitarian might ultimately present the same threat. It was this that made the struggle with twentieth century totalitarianism so titanic, fifty, sixty, seventy years ago—the depth of the threat, reaching for our very center of being and for control of love itself. The willingness of so many in the mid-twentieth century to risk the world itself to defeat it, the whole future of individuals on earth, so appalling, so numbing in retrospect, may be at least a bit understandable when this was the threat in prospect.

²⁶ William Wordsworth, *Lines Written a Few Miles Above Tintern Abbey*, in *WILLIAM WORDSWORTH: THE MAJOR WORKS*, 134 (Stephen Gill ed., 2000).

²⁷ GEORGE ORWELL, *1984* (1949).

I grew up during that struggle. I was shielded from what was happening and what might happen, as I think most of my age were in the United States. The relevance of eugenic racism and the Holocaust to ourselves, the relevance of the Nuremberg Principles to ourselves, and also what our own willingness to unleash nuclear weapons meant about ourselves both existentially and morally, have been explored, faced, and felt gradually and over decades. They are felt now, in varying degrees, and have had their impact in many ways.

But during these same decades I have come to wonder whether no less may be at stake in the competition between the legal form of thought and contemporary forms of thought being strenuously pushed that would if they could erase from any mind the individual and the person whom law recognizes and protects. The so-called ordinary person may smile at the cosmology of the well educated. I certainly have faith that those who so strenuously push do not know their own minds as completely as they think they do, and one reason, of course, is law, which is part of the air they breathe. I think true authority will always be reached for, and more out of necessity than desire. But still, we do not know what would have happened if events had taken a different turn. Orwell's vision is haunting. The willingness of so many once to risk the whole world is haunting. At the very least they make the place of the legal form of thought in understanding Nature itself worth conscious attention by lawyers and non-lawyers alike.