

Great Beyond All Comparison

Kenneth Walden

In the climax of the 1990s action flick *On Deadly Danger* our hero Stump Chunkman confronts a group of villains planning to shoot cobras into an elementary school so they can rob the cafeteria. Enraged, Stump hoists the Top Villain over his head. “You were going to kill those kids—all for three hundred measly bucks? You have a grossly distorted conception of the value of humanity [*Wert der Menschlichkeit*].” Stump then defenestrates Top Villain into a volcano. The filmgoer is thrilled by this triumph of muscles over evil, but, as with many great works of cinema, she is also left with a problem. Top Villain’s mistake is not just one of wronging the children by shooting cobras at them. It is also, as Stump says, doing it for such paltry gains—“for three hundred measly bucks.” Top Villain’s error is one of misvaluing these persons.

But what would it mean to correctly value them? Would these villains have behaved better if they held out for more money—if they had valued these children at not less than a thousand dollars a head? Most would deny that there is a dollar figure that would assuage the feeling of misvaluation. It’s not that a person is worth many dollars more than three hundred. The value of humanity lies on a different level of value, one that cannot be reconciled with things valued in dollars and cents. As Stump explains in the film’s coda, the world contains both “things,” whose value consists in their “price,” and persons, who have a completely different value. This second kind of value—“dignity”—merits a completely different kind of “estimation” than things with price, an estimation he calls “respect.” Most important, Stump continues, the worth found in dignity is “*incomparable*.” This means that it is a mistake not only to set the value of a person at three hundred dollars, but to set any price at all. The misvaluation is not a matter of setting the price of persons too low but talking about it as something that can *be* low or high—as something that admits of comparisons.¹

This is stirring rhetoric, but is it sound philosophy? I think there are basically two kinds of argument for the claim that the value of persons is incomparable. The first tries to establish that comparisons of value involving persons are inapt. David Velleman’s (2015, 48) position is representative:

What makes a person special is not a value that sets him apart from others; it's a value that calls for appreciating him by setting him apart, a mode of appreciation that considers him alone. The key to this solution is that values are normative, in the first instance, not for actions or choices but rather for appreciative attitudes. To be valuable is to be worthy of being valued in some way—that is, worthy of being the object of some appreciative response. This conception allows us to understand a kind of value that is not merely incommensurable but constitutively incomparable, because it is properly appreciated by a response that essentially involves a refusal to make comparisons, an insistence on cherishing its object in isolation from others.²

Velleman's suggestion is that value comparisons involving persons may be possible but are prohibited, inappropriate, or unfitting because those comparisons violate a requirement inherent in the special nature of the value of humanity.

The second style of argument aims to show that value comparisons involving persons are impossible. As far as I know, this kind of argument has received no attention, save for some vague remarks by Kant. Dignity, Kant says, is “infinitely far above all price,” and this means that “it cannot at all be brought into computation or comparison [with price] without, as it were, mistaking and assailing its holiness” (4:435).³ Now we could read these remarks as falling within the first genre of argument, as suggesting that comparing the value of persons is inappropriate because it “mistakes and assails” a comparison-prohibiting kind of value. But this reading is at odds with the fact that Kant himself is making a sort of comparison when he says that dignity is “infinitely far above” price. This suggests that the reason dignity cannot be “brought into computation or comparison” is not the inaptness of personal value comparisons per se but *this* feature: dignity's being “infinitely far above” price. What Kant might mean here is that things of infinite size are, for some reason, *too big* to figure in any comparisons, and so the infinitude of dignity makes value comparisons not just inapt but impossible. This conjectural reading is reinforced by the fact that elsewhere Kant makes exactly this claim about the incomparability of the infinite. “The infinite,” he says in the third *Critique*, “is absolutely (not merely comparatively) great” (5:254), and by “absolutely great” he means “great beyond all comparison” (5:248).

Putting these thoughts together suggests one argument Kant may have had in mind:

1. Persons have infinite value.
2. The size of infinite quantities and magnitudes cannot be compared to the size of other quantities or magnitudes.
3. Therefore, the value of persons is incomparable.

This argument is obviously different from Velleman's. It does not say that we are doing something inappropriate if we compare the value of persons. It says that such a comparison cannot be made.

My goal in this chapter is to explain and defend this argument.

1. The Value of Persons Is Infinite: Brute Force

I will first offer something of a brute force argument for the first premise. To do this, I will take value to be function v from an item x to a cardinal number $v(x)$. This gives us a simple understanding of finite and infinite value. If $v(x)$ is finite, then x has finite value; if $v(x)$ is infinite, then x has infinite value.

The argument goes like this. If there is a type of object—call them “things”—that satisfies the following two principles, then we can guarantee that persons have infinite value:

Transcendence of dignity. For all persons y and possible things x , $v(y) \geq v(x)$.

Open-endedness of price. For all finite cardinals κ , there could exist a thing x such that $v(x) > \kappa$.

The inference from these principles to premise 1 is simple. Suppose, toward a contradiction, that the value of a person is a finite cardinal. Then Open-endedness would entail that there could be a thing whose value is greater. But Transcendence entails that this is impossible. So our supposition is false and the value of a person cannot be finite. Importantly, it does not matter what exactly these “things” are. All that matters is that there are some entities or other that satisfy these two conditions. It is natural to think that any entity is either a thing or a person, but this is not an assumption of the argument; there could be a third class of valuable entities.

All that said, I will try to defend these two principles by relying on a particular conception of things. Stipulate that *things* are those items whose value is entirely conditioned on their relationship to one or more persons—on their being valued by persons, desired by persons, instrumentally useful to persons, etc. If we make this stipulation, what can be said for our two principles?

Transcendence is close to conventional wisdom. Every person, no matter his warts, is worth more than all things, no matter their splendors. But it'll be useful to have an argument for the proposition, lest it turn out to be an empty piety. So let's examine the conditioning relationship that defines the relationship between things and persons. Suppose that a muffin is valuable to me. If I ask why the muffin is valuable, I am apt to receive an answer listing two kinds of considerations: a list of things that are valuable (like gustatory pleasure and

nutrition) and a set of nonnormative claims about how the muffin is suitably related to those things so as to inherit their value. Call the first set of items the thing's *value conditions*; a thing is valuable because it constitutes, causes, realizes, or otherwise secures these things. It would be very surprising to hear that a thing is *more valuable* than the aggregate of its value conditions—more valuable than the mereological union of all its value conditions. It would be very odd to think, for example, that the muffin is *more* valuable than the gustatory pleasure and nutrition that it provides, since these attractions are all the muffin has going for it. Likewise, it would be surprising if three hundred dollars turned out to be more valuable than any of the classes of commodities that can be bought with that sum, or if a memento turned out to have more value than the memory it arouses. This is most clear in the case where the relationship is instrumental. If someone told us that *b* is valuable only because it is a means to *a* but that $v(b) > v(a)$, we would want to know where the excess value comes from.

The general principle suggested by these examples relates the value of the aggregate of value conditions—which we can think of as a mereological union—to the value on which they are conditions:

Superiority of value conditions. If *y* is the aggregate of the value conditions of *x*, then $v(x) \leq v(y)$.

If we adopt the conception of *things* suggested above—entities whose value is ultimately and entirely conditioned on their relationship with persons—then Superiority entails Transcendence. Persons must be at least as valuable as things so understood because the only reason that things are valuable in the first place is their bearing the right relationship to persons.⁴

Open-endedness is more controversial, since we might reasonably think that the value of things is bounded. Think of some very valuable things: cures for horrible illnesses, transformative works of art, comfortable shoes. Why not think that one of these treasures represents an upper bound on the value of things—that there is nothing whose value is greater than that of, for example, a cure for the Red Death? The simple answer is that even very valuable things can be improved. If this tube contains a serum that cures the Red Death, then it is very valuable. But if it also cures the Blue Death, then it is more valuable. If it cures both with no side effects, then it is more valuable still. And if instead of a single dose, it contains a dozen, then it is yet more valuable. In general, these imagined improvements—multiplication, recombination, and purification—can enhance things that are already quite valuable. And if these sorts of improvements can be iterated indefinitely—granted, a big “if”—then the value of things will be open-ended.

Against this possibility, a skeptic might insist that even these iterated improvements will be bound by the needs and wants of humanity. Suppose we have a serum that cures all diseases, extends our lifespan indefinitely, teaches us Esperanto, acquaints us with the poetry of Alexander Pushkin, and is sufficiently concentrated to do these things for every human being who will ever exist. Is anything more valuable than this? Maybe not. It may be that such a thing cannot be improved upon given the actual needs and wants of humanity. But this is why it is important that Open-endedness is formulated in terms of “possible” things. The claim is not that the value of things forms an actually open-ended hierarchy but that for any finite cardinal, there *could* be something more valuable than it. This is the appropriate way to formulate a claim like Open-endedness. That humanity has a certain value is a necessary proposition and so should not depend on contingent facts like whether there are a hundred persons or a trillion, or whether human appetites are quite modest or utterly boundless. The way to respect this fact is to say that the value of a person exceeds the value of all things for any possible configuration of the universe.

This clarification opens the door to some simple arguments for Open-endedness. Adopting the definition set out above once more, we can say that the value of things is open-ended because the possible number of valuers in the world is open-ended. For any finite cardinal κ , we can imagine an experience of modest finite value t —seeing a nice painting, say—and a possible number of people n such that the value of n people having that experience will equal $nt > \kappa$. A similar argument can be premised on the idea that our valuing activities are open-ended. Suppose Veronica is the only person in the world. Now consider those things whose value is determined entirely by Veronica’s evaluative attitude toward them. Veronica doesn’t like mud, so mud is valueless, but she does like crackers, so crackers are valuable. Now suppose that Veronica is a bit of zealot about the value of tea. Every time she considers a challenge to her valuing tea—by imagining someone asking her “But is tea *really* valuable?”—she not only affirms her valuing but increases the amount she values tea by $\frac{1}{4}$. Further imagine that Veronica is a bit of a frenetic reasoner and so she accelerates the rate at which she entertains these challenges. She starts by taking $v(\text{tea}) = 1$ at time $t = 0$. But then she entertains a challenge at $t = \frac{1}{2}$ and in doing so takes $v(\text{tea}) = 1\frac{1}{4}$. Then she does this again at time $= \frac{3}{4}$ and sets $v(\text{tea}) = \frac{25}{16}$. And then again at time $= \frac{7}{8}$. And so on. (What does it mean, we might wonder, to say that the value Veronica assigns tea increases like this? The natural thought is to say that they reflect Veronica’s preferences of exchange. Maybe crackers are plentiful in Veronica’s world and so make a good unit value. At $t = 0$, Veronica would exchange one cracker for a cup of tea, but at $t = \frac{3}{4}$ she would be willing to exchange $\frac{25}{16}$ crackers for a cup of tea.) The sequence of values that Veronica assigns to tea is divergent: it will get bigger and bigger without bound before we arrive at $t = 1$. This means that for

any arbitrarily large finite cardinal κ , we can point to a moment in Veronica's world—an instant before $t = 1$ —where a cup of tea is valued at a level greater than κ , which means the tea will have value $> \kappa$. Veronica may have capacities that no actual valuer does, and her valuing activity is certainly eccentric, perhaps even irrational. But I see no reason to believe her case is in any way incompatible with the demands of valuing. I see no reason to think, that is, that she is not a real valuer. Therefore, as far as valuing *as such* is concerned, there could be someone like Veronica, and that is enough to make price open-ended.

2. The Value of Persons Is Infinite: A More Philosophical Explanation

The foregoing arguments for my first premise are not very philosophically nourishing. They rely on coarse mathematical devices to produce the desired conclusion, but they don't reveal much about why these conclusions are true. For that reason, a more programmatic, if also more speculative argument may serve as a useful supplement.

Offering this argument requires me to say some general things about the infinite and Kant's conception of it. A. W. Moore (1988, 206) observes that philosophical debates about the infinite have seesawed back and forth between two different clusters of concepts:

Within the first cluster we find: boundlessness; endlessness; unlimitedness; unsurveyability; immeasurability; eternity; that which is such that, given any determinate part of it, there is always more to come. Within the second cluster we find: completeness; wholeness; absoluteness; perfection; universality; self-sufficiency; autonomy; creativity; freedom. The concepts in the first cluster are more negative, they convey a sense of potentiality and they suggest an infinite that lies without. The concepts in the second cluster are more positive, they convey a sense of actuality and they suggest an infinite that lies within. We can label the concepts 'mathematical' and 'metaphysical' respectively.⁵

Moore suggests that Kant brooks both conceptions of the infinite, but he does so in a very special way. Metaphysically infinite things *appear* mathematically infinite when cognized by finite creatures like ourselves. For example, *the world* understood as a self-sufficient and unconditioned whole is metaphysically infinite. But we can only come to know the world by interacting with it through our finite cognitive faculties—in particular, through a bounded sensory field and a limited store of concepts—which means that

what we are given must be an aspect of the world, something incomplete, partial, and distinct from us, impinging from without. But Kant argues that reception of this kind must be self-conscious, so that what we receive we must at the same time be able to recognize as conditioned.

It follows that,

given any particular object of our knowledge, we must be able to step back, see it in a suitable context and come to know more. Only in this way are we able to see it as a feature of what is out there, independent of us, with its own conditions of existence. But coming to know more in this way simply means receiving more; and what we receive will itself, along with what was originally received, form a conditioned aspect of the world. This sets up a regress. And the regress clearly proceeds indefinitely, in the way that is the hallmark of the mathematically infinite. Here we have an argument, in very Kantian terms, for the necessity of something that Kant takes to be more or less a *raw datum*, namely the infinitude of space and time, in the mathematical sense. Space and time, for Kant, are not only intuitions but forms of intuition. Roughly what this means is that they constitute the framework within which our reception takes place. But that framework has to be infinite if there is to be any guarantee, as there must be, that we can receive the condition of anything that we can receive. We need, as it were, infinite elbow-room. More particularly we need elbow-room that is infinite in the mathematical sense. The mathematically infinite is a natural concomitant of a finite being's coming to know an infinite world, in the truer, metaphysical sense. More succinctly, what is metaphysically infinite must appear to a finite being under a mathematically infinite aspect. (210–211)⁶

Because our idea of *the world* is infinite in the *metaphysical* sense—complete, unconditioned, total, absolute—and because cognition demands us to seek the conditions for everything we represent, the representation of that world by finite creatures like ourselves must be “open-ended” in a way that makes the framework in which we represent that world—the manifold of space and time—*mathematically* infinite. This is the sense in which the world is mathematically infinite “in appearance.”

I want to venture an analogous explanation for the infinite value of persons. Persons are metaphysically infinite. More precisely, the capacity for valuing that is grounded in our rational nature is metaphysically infinite. One of Kant's most quoted passages, from the *Critique of Practical Reason*, expresses just this idea:

Two things fill the mind with ever new and increasing admiration and reverence the more often and more steadily one reflects on them: the starry heavens

above me and the moral law within me. . . . The first begins from the place I occupy in the external world of sense and extends the connection in which I stand into an unbounded magnitude with worlds upon worlds and systems of systems, and moreover into the unbounded times of their periodic motion, their beginning and their duration. The second begins from my invisible self, my personality, and presents me in a world which has true infinity. (5:162)

Here Kant compares the “unbounded magnitude” of the outer world to the inner world of the “invisible self,” which, he says, has “true infinity.”⁷

What would it mean to say that my capacity for valuing is metaphysically infinite? The world as a whole is metaphysically infinite because it possesses properties associated with that notion. It is complete (there is nothing it doesn't contain), self-sufficient (it does not depend on anything outside of itself), and absolute (it makes no sense to say that some notion is relative *to the world* as it might make sense to say that it is *relative to a community* or *a believer*). Our capacity to value is metaphysically infinite for the same reason: because it is autonomous (I am responsible for my valuing), absolute (it is the last court of appeal on questions of value), and, most important, unconstrained (there are no principled limits on the forms my valuing can take).⁸

Moore understands the claim that space and time are infinite in extension as reflecting how a metaphysically infinite world must appear to cognitively limited beings such as ourselves. I want to say something similar about our capacity for valuing. The claim that persons have infinite value is ultimately about how a metaphysically infinite humanity must appear to those same creatures. Suppose we are engaged in a systematic survey of value. How much is this bucket of treacle worth? How much is this box of nails worth? How much is this used handkerchief worth? How much is this person worth? As with our cognition of objects in space and time, answering these questions seems to require us to orient the objects of evaluation in a larger system that represents the relevant relationships between the items we value. The nails are valuable because they can be used to hold these boards together, and holding boards together is valuable because then I can stand on them to reach the top shelf, and reaching the top shelf is valuable because that's where the treacle is. And so on.

We can ask several questions about the basic shape of this network of value relations. Are there any limits on how many things can have value? On the density of relations between values? And most important, are there limits on how valuable something can be? If we take seriously the idea that our capacity to value is metaphysically infinite, then we should think the answer to each of these questions is no. We can brook no limitation on this framework of value because of one of the features that made our capacity to value metaphysically infinite: because this capacity is unconstrained. The imposition of any limit on the field in which we

represent these activities will be a fatal distortion of what is possible in the way of value. Only a network that is potentially unlimited in magnitude and density will guarantee an adequate canvas for representing a world of value created by unconstrained valuers. Veronica's assessment of tea exemplifies one dimension of this need. Her valuing is unconstrained with respect to the magnitude of value she confers on a particular item. What I am suggesting is that even if Veronica is an exceptional valuer, she reflects an important feature of our capacity for valuing: its radical freedom. This feature means we need the same "infinite elbow-room" for representing value as we need for representing objects in space and time.

These reflections give us a slightly deeper explanation for Open-endedness. Open-endedness is true because our framework for representing value must be open-ended. And our framework for representing value must be open-ended because it is a framework for representing the activities of a metaphysically infinite capacity for valuing.

This is a claim about the value of things, but what does it entail about the value of *humanity*? The important point is that the value of humanity is not going to reside anywhere within our "framework" of values for reasons having to do with Superiority. Because our humanity is the condition of the value of things, its value must be at least as great as the value of any of these things. This means it must have infinite value.

Moore suggests that space and time appear mathematically infinite in extension because of the way that our finite cognitive powers interact with the metaphysical infinity of the world. My analogous suggestion is that humanity appears mathematically infinite in value because of the way those same cognitive powers interact with the metaphysical infinitude of our humanity. Our cognitions of value will naturally be oriented in a more or less mathematical framework. But to do justice to our unconstrained power of valuing, this framework must be open-ended in extent. This means that when we then try to orient the value of the power itself within the framework, we find that it has nowhere to fit. It must instead lie *beyond* it, in the way that the first infinite ordinal lies beyond all the natural numbers. We must, that is, represent it as being mathematically infinite.

As I said, this is a more *recherché* explanation of our first premise, but I hope it might offer a useful account of the deeper reasons behind the surprising claim that the value of persons is infinite.

3. Incomparability and Infinity: Some Historical Arguments

Having laid out a case for the first premise of my target argument, I turn to the second—to the idea that infinite quantities and magnitudes are incomparable. The idea that infinite quantities are incomparable is of a piece with a more general

skepticism about our ability to apply mathematical concepts to those quantities. Aristotle is the classic source for this skepticism. To compare two quantities requires our being able to form each into a completed totality, to say that this whole is greater than or equal to that whole. But infinite quantities cannot be formed into completed totalities. This is what distinguishes infinite collections. For however much of the collection we take, there will always be something left over. For example, however many natural numbers I count, there will always be yet more natural numbers; this is what makes the set of natural numbers infinite. When I say that the sets {1, 3, 5} and {2, 4, 6} are the same size, what I mean is that I get to the same place when I count the members of each set. But the natural numbers and the squares are infinite precisely because we can never finish counting them. This means that we can never complete the process—counting—that would ground a comparison of size (*Physics*, III.4–8).

A related argument for the same conclusion relies on a familiar fact known as Galileo's Paradox. Consider the set of natural numbers and the set of square numbers. Both are infinite sets. There is a sense in which the set of natural numbers is larger than the set of square numbers. Every square number is a natural number, while the vast majority of natural numbers are not squares. But there is also a sense in which the sets are the same size. Every square can be mapped onto a unique natural number and every natural number onto a square. So the squares and the naturals can be paired up in a one-to-one relation. We therefore have reason to take the squares to be equal in size to the natural numbers and a reason to take them to be strictly smaller. A natural diagnosis of this result is that the necessary conditions for applying our concepts of greater or equal size are not satisfied for infinite quantities, so comparisons of infinite quantities simply don't make sense.

What are these conditions on size comparison? There seem to be two platitudes. First, one-to-one correspondences entail equality of size. Second, a whole is always larger than its proper parts. (This was one of Euclid's "common notions.") For comparisons of finite quantities these requirements always agree, but for infinite quantities they do not. The natural numbers are in one sense larger than the squares and in another sense equal in size. The machinery, so to speak, we use for comparisons cannot be used in the case of infinite quantities because its conditions are not satisfied.⁹

In the introduction I reported Kant as saying that the infinite is "great beyond comparison." His argument for this claim borrows from both Aristotle and Galileo but involves a transcendental twist. The sort of cognition in which comparisons of size occur will be "mathematical." This means they will employ numerical concepts, which are applied to our experience in the following sort of way. To measure a magnitude—to represent it as being however many units long—we select a "quantum" and successively synthesize copies of it in our

imagination until the magnitude is exhausted. Think, very roughly, of covering the length of an ocean liner by stitching together hundreds of buttons, one after another. Mathematical representations of this magnitude depend on this act of imaginative synthesis. One magnitude is larger than another, for example, just in case it takes more copies of the same quantum to cover it in imagination. On this conception, mathematical cognition, including comparison, depends on the success of a particular act of synthesis. But this cognitive machinery breaks down in the infinite case because that synthetic process cannot be completed. When we think about infinite magnitudes mathematically, what we are representing is not a *determinate* magnitude, not a successful synthesis. We are representing an *indefinite* progression of a process of synthesis. Our representation is of an interminable carrying-on rather than a final product. And this is not a suitable object of numerical comparison for the simple reason that it does not constitute a unified object.

Kant's story is a little more complicated than this, but not in a way that negates the basic point. He does think we have a *kind* of grasp of the infinite as a totality (as opposed to the infinite as potential). He says in the *Critique of Judgment*, "Even being able to think [of the infinite] as a whole indicates a faculty of the mind which surpasses every standard of sense . . . [for] to be able to think the given infinite without contradiction requires a faculty in the human mind that is itself supersensible" (5:254). But this "thinking of" is very tenuous. It does not amount to the cognition we have of facts like "there are more dwarves than stooges"—cognition that depends on the successful subsumption of experience under a mathematical concept. It is an "idea of reason": something we can gesture at as the terminus of an unending sequence, but not something we can attribute to an object of cognition. For this reason, the kind of thought we can have of this idea will not support anything like a comparison of size.

4. Incomparability and Infinity: Resistance

The previous section offered some historical arguments for the second premise in our argument. I expect that few readers will be satisfied by them. The reason has to do with the radical shift in thinking about the infinite that took place in the nineteenth century. I can't do justice to all these changes here, but the main points can be neatly summarized. Nowadays most will deny that we can think of infinite collections only as potentials; on the contrary, we can, for example, think of the natural numbers as a set on par with any finite set. The paradoxes of the "actual" infinite unearthed by Aristotle and others are not paradoxes at all but peculiar features of the infinite. Second, most people will happily reject Euclid's "common notion" that a whole must be larger than its proper parts while

affirming one-to-one correspondence as the sole criterion of size comparison. This move easily resolves Galileo's Paradox in favor of the claim that the natural numbers and the squares are of the same size. Finally, many will reject Kant's view that mathematical cognition has sensible conditions in favor of a view on which mathematical facts are ascertained by a faculty that operates quite independently of sensory experience.

Accepting these three propositions allows us to turn aside the historical arguments just glossed and open the door to Cantor's paradise. We can insist that there are actually infinite multiplicities, that these multiplicities are of different sizes, and that we can unproblematically compare the size of these multiplicities. In this setting, the claim that the value of persons is infinite does not make comparisons of value impossible. We can satisfy Transcendence and Open-endedness by saying that the value of all persons is equal to the first infinite cardinal, what Cantor called \aleph_0 . This is a value whose "size"—its cardinality—is equal to that of the set of natural numbers. The comparative claim that, for example, two persons have equal value can be true in exactly the same way as the mundane claim that the sets $\{1, 2\}$ and $\{3, 4\}$ are of the same size. If we like, we could even assert *inequalities* in the value of persons. Most persons have value \aleph_0 , but (we impishly suggest) certain natural aristocrats have value equal to the first uncountable cardinal, \aleph_1 . Overcome with the zeal of ranking, we might continue by saying that in fact there is a whole hierarchy of personal merit, and the value of each rung in this hierarchy corresponds to a different value: $\aleph_0 < \aleph_1 < \aleph_2 < \dots$. At the end of this sequence lies \aleph_ω , which is the value of certain world-historical figures like Napoleon or Walt Disney. I am not suggesting that anyone would want to say any of this. The point is that once we accept this picture of the infinite and our thought about it, we have the machinery to make precise, meaningful, and abundant comparisons about things that are infinitely large. And this knocks down the second premise in our opening argument.

5. Restoring Incomparability

I have presented a roughly Kantian case for the two premises in making up our little argument for incomparability. And in the previous section I indicated the point at which I think skepticism about this argument will be most trenchant. I now want to push back against that skepticism. I will not deny any part of the Cantorian landscape just surveyed but instead say that our original argument can be recast in terms perfectly compatible with it.¹⁰

Open-endedness, as I originally stated it, says that for every finite cardinal κ there could exist a thing whose price is greater than κ . But why make a restriction to finite cardinals? From a pre-Cantorian point of view, this restriction may be

justified, since the very idea of infinite price would be incoherent. But if we are going to live in Cantor's paradise, we can't be so squeamish. Here is a simple argument, related to one from before, that we can indeed conceive of things with *infinite* price. The world could be temporally open-ended and valuers could go on reproducing themselves in perpetuity. In this world there are countably infinite valuers. It is also possible that each of these individuals would have an aesthetic experience of finite nonzero value t if they viewed a nice painting. It follows that the extended event whose constituent parts are individual viewings of this painting will have countably infinite value.

What does this liberalization of Transcendence get us? By itself it's no help for our original argument. There could be things whose value is as large as \aleph_{37} and comparisons involving the value of persons would still be tractable. But it raises the question of whether similar reasoning can push the value of things—and with it, via Transcendence, the value of humanity—ever higher up the hierarchy of infinite cardinals, just as our earlier arguments pushed the value of humanity up the hierarchy of finite cardinals.

One simple way to do this is to imagine worlds with ever greater numbers of persons who confer some finite value on things. The problem with this strategy is that for relatively small n , the claim that there could be a world with \aleph_n persons starts to sound incredible. Maybe we can entertain the thought that there are as many valuers as natural numbers, but it's much harder to conceive of a world in which people outnumber the reals. Our other argument proffered in support of Open-endedness—the one involving Veronica accelerating revaluation of tea—depended on the idea that our activities of valuing were open-ended. This approach may be more promising. What we would like are examples of valuing activities that seem to distinguish between *transfinitely* many levels of value. The simplest cases (admittedly quite artificial) will involve individuals who value certain mathematical objects. Here are two:

- (i) George is a mathematical aesthete. He believes that certain mathematical structures are beautiful, some elegant, some are dumpy, others sublime. He values them accordingly. George aesthetically values some sets, in part, because they are so *impressive*. One feature of impressiveness is that if S is impressive, then any set strictly larger than S is proportionally more impressive. (So $\{x, y\}$ is twice as impressive as $\{x\}$.) And for this reason, if S is impressive and T is larger than S , then George will value T more than S in proportion to the size of T to the size of S . So described, George's valuing preferences will extend up the same hierarchy as the size of sets.
- (ii) The Setters are a people obsessed with mathematical games. The linchpin of their society is a game called Set, with the following structure. A problem is posed whose answer is a set. The larger the set, the harder the Setters think

the problem is, and, consequently, the more they value that solution. So if a problem has solution {Harry's cat} or {7}, it is quite easy and no one values that solution very much. A problem whose solution is {Toucan Sam, my left shoe} is a little harder and accordingly valued more. Now imagine that this game is designed so that for every cardinal κ , there is a question whose unique answer has κ members. Like George, the Setters' value attributions would seem to extend up the same hierarchy as the sets.

Both George and the Setters value sets; among those sets they value bigger ones more. This feature of their valuing extends beyond finite sets into the transfinite. If we suppose that these sets have the value they do because of George's and the Setters' valuing activities, then we will need to countenance a *heck of a lot* of different values for sets. If valuers like George and the Setters are possible, then price must extend all the way up the transfinite hierarchy.

This point is significant because it supports a liberalization of Open-endedness. Namely this:

Unrestricted open-endedness of price. For every cardinal κ , there could be a thing with value greater than κ .

This version of the principle removes the proviso "finite" from our original version.

Pairing Unrestricted open-endedness with Transcendence has interesting consequences. Suppose that the value of a person is some cardinal κ . By Unrestricted open-endedness, there is a thing more valuable than κ . But by Transcendence *nothing* can be more valuable than a person. So we have a contradiction. For any cardinal whatsoever, the proposition that persons have value κ leads to a contradiction. It would seem to mean that the value of persons must somehow lie *beyond* the hierarchy of cardinals.

Cantor had a name for this exalted status. He called it the "absolutely infinite." Cantor's transfinite mathematics were premised on the notion that we could, *pace* Aristotle, take infinite multiplicities as completed totalities instead of indefinite multiplicities. But Cantor also recognized that there are some multiplicities for which this cannot be done. A simple example is the set of all sets. Now the set of all sets—call it V —must have, like every set, a powerset $\wp(V)$. The powerset of V is a set whose members are the subsets of V . A set is always strictly smaller than its powerset, so V should be smaller than $\wp(V)$. But since V contains all the sets, including itself, $\wp(V)$ must be a subset of V . But a set is at least as big as its subsets. So we have a contradiction: a set of all sets would be both smaller than and at least as big as its powerset. The natural way to assuage this contradiction is

to say that there is no set of all sets, and so the “plurality” or “multiplicity” of sets is something else—maybe a “proper class,” maybe not an entity at all.

Whatever we say about this plurality, it has no position on the hierarchy of size that Cantor devised, and it is not subject to comparisons of size for more or less the reasons that Aristotle originally gave about the infinite: it cannot be accommodated by our machinery of comparison. Cantor realized this. The absolutely infinite, he says, is a “true infinite” whose “magnitude is not subject to any increase or reduction, and for this reason it must be quantitatively conceived as an absolute maximum.” He goes on to talk of the absolutely infinite in terms highly evocative of the metaphysical infinite. The “absolutely infinite” is “realized in the supreme perfection, in the completely independent, extrawordly being, in God.”¹¹

If examples like George and the Setters are coherent, then the value of humanity is absolutely infinite in something like Cantor’s sense. It is an “absolute maximum” and “not subject to any increase or reduction” because the very idea of taking it as a completed totality that we might measure or compare yields the same kind of contradiction as the idea of a set of all sets.

This conclusion is essentially a more extravagant recapitulation of the one drawn two sections ago. The obstacles to comparing infinities suggested by Aristotle, Galileo, and Kant can be re-created in the more permissive climate of Cantor’s set theory. Perhaps infinite multiplicities can be formed into totalities and compared in a straightforward way, but if we make some assumptions about what is coherent in the way of valuing, then we should expect the value of persons to transcend *even this* ample scheme.

There is a deeper point here as well. Our cognitive abilities, in particular our mastery of mathematical concepts, makes our ability to represent magnitudes in the world unbounded in a certain sense. Our ability to value things is also unbounded. (This was the deeper rationale for our Open-endedness principles.) Naturally, both of these uses of “unbounded” need to be spelled out, and doing so will occasion disagreement. But if our ability to value things is *at least as unbounded* as our cognitive capacities, then Transcendence forces us to place the value of persons *beyond* whatever framework our cognitive powers employ to represent value. That is, if all quantities we can entertain in cognition are candidates for degrees of valuing a thing, then Transcendence entails that the value of humanity lies *beyond* the realm of cognizable—and so comparable—size. It is hard to spell out the crucial notion of “at least as unbounded” with both exactness and generality, but this relationship between our capacity for valuing and our representational capacity is, I believe, the ultimate reason why the value of persons will be “great beyond all comparison,” no matter what our opinions about the infinite are.

Why should we accept the claim that our practical ability to value is “at least” as unbounded as our cognitive ability to represent magnitudes? We have already seen Kant’s answer. Our rational nature is an absolutely unconditioned and unbounded capacity to confer value on the world. So we must take the framework for conferred value to extend to the very limits of our cognitive capacities. We need all the elbow-room we can get to capture our utterly boundless valuing activities. And we must do this whether those limits are the cozy ones proposed by Aristotle and Kant or the intergalactic ones that Cantor suggests. To think that there is some quantity that can be superseded in *thought* but not in *value* is to see persons as fundamentally limited.

6. The Sublimity of Humanity

The argument I have been considering purports to show that something goes awry when we try to make comparisons with the value of humanity. Comparisons of size, and indeed the broader range of cognitive judgments of which such comparisons are a part, carry certain preconditions, but the value of humanity does not satisfy those conditions. It is “too big” to fit on the apparatus we have for measuring and comparing value. In this final section I want to consider the question of what this argument means for how we ought to think about other persons.

One possible consequence is broadly “antitheory” in the sense that it imperils the possibility that our duties to persons can be codified into a set of consistent, relatively comprehensive, and more or less exceptionless moral rules. But this consequence comes about only in conjunction with two further assumptions:

- (a) Much of the explanation of the truth of the principles making up the correct ethical system will ultimately refer to facts about the value of persons. For example, it is because Stump is a person of worth that I have duties of beneficence to him, that I must respect his rights, that I can bind myself to him through promises.
- (b) The resolution of many otherwise conflicting moral principles will depend on comparisons involving the grounds of those principles. For example, if I have a *prima facie* duty against disappointing Stump and a *prima facie* duty against disappointing a dozen of his confederates, this conflict is resolved by comparing the grounds of those duties—i.e. the value of the persons to whom the duty is directed.

If (a) and (b) are true, then much of ethical theory will depend on comparisons of interpersonal value to resolve *prima facie* conflicting duties, which are, of course,

ubiquitous. So if those comparisons are in fact impossible, then a relatively large part of what we would hope ethical theory would include turns out to be utterly groundless. This is a big “if.” Beyond a few primitive forms of consequentialism, it is a perpetual challenge to know whether a particular part of ethical theory is committed to (a) and (b). Doing that would take more attention to detail than I can offer here.¹²

Instead, I want to discuss a more positive consequence of the claim. If the value of humanity is “great beyond all comparison,” then how *should* we respond to other persons? What kind of attitude suits creatures with this kind of value? The suggestion I want offer is that the appropriate response is an aesthetic one. The correct response to the incomparable value of a person is to experience that person as sublime. There are hints of this idea in Kant. For Kant, judgments of sublimity have a self-regarding character. To say that Glen Coe is sublime is to say something about the quality of one’s own experience. It is to say that viewing the monolith arouses distinctive feelings of humiliation and elevation. The infinite occasions judgments with the same self-regarding character. Despite their surface grammar, they are not fully objective cognitive mathematical judgments like “There are three tigers.” They are judgments that implicitly refer to our own cognitive abilities. To say that something is infinite is to say that it exceeds my cognitive capacities—that it is too big to be subsumed under a numerical concept.

This is why the infinite and the sublime are so closely connected. In experiencing Glen Coe as sublime, I am experiencing a “vibration,” Kant says, between the painful humiliation of my cognitive capacities and the superiority I feel in my ability to transcend those capacities by pursuing a higher “vocation.” To judge that something is infinite is to judge that it is too great for our representational capacities. Hence the humiliation. But to even grasp this idea—the idea of something that transcends those capacities—reflects some superior power in ourselves, a power that Kant associates with a metaphysically infinite power of reason. And this creates a feeling of elevation or superiority.¹³

If persons have infinite value, then it may be appropriate to experience them in this way—as overwhelming our usual ways of representing value in the world. But what exactly would this come to? One facet of the sublime, as I just explained, is the striking down or humiliation of some activity or project connected to the finite parts of our nature. This humiliation involves the revelation that some conceit of this project is an illusion. In Kant’s examples, natural wonders may humiliate the understanding’s ambition to provide an exhaustive representation of the world. But now consider a different activity, what we could call *pricing*. This activity encompasses all the dispositions to preference and exchange by which things come to have their price. It is predicated on our finite nature because how we value things depends so much on our inclinations and because these practices are codified by mathematical concepts. The infinite value of humanity—be it

ours or someone else's—can humiliate us *qua* pricers in the same way that Glen Coe humiliates us *qua* cognizers because it confronts us with the hopelessness of pricing's ambition to orient all value into a common, roughly mathematical framework. This means that the appreciation of a person's worth may involve a certain amount of pain. It may involve the painful realization that the pretensions of comprehensiveness implicit in the activity of pricing are baseless.¹⁴

The other side of the sublime is a feeling of elevation or superiority. It is easy enough to see why the experience of one's own infinite value would be elevating. The transcendent value that humiliates the ambitions of pricing is, after all, my value, and the frustration of my pricing activities that results from this value will be accompanied by the distinctive pleasure of exercising the "unlimited capacity" that makes this value infinite (5:259). But what about other people? It is not obvious why the transcendence of *your* value should be at all elevating for *me*. Indeed, on first inspection, the most elevating outlook would seem to be a kind of practical solipsism: a view on which I regard myself alone as transcendent of price and everyone else as mere things. Perhaps this outlook is immoral or irrational, but it would make me feel superior. So why would I feel elevated by discovering it is false?

This question is the subject of a famous and famously enigmatic passage from Iris Murdoch ([1959] 1997, 215–216):

Art and morals are, with certain provisos which I shall mention in a moment, one. Their essence is the same. The essence of both of them is love. Love is the perception of individuals. Love is the extremely difficult realization that something other than oneself is real. Love, and so art and morals, is the discovery of reality. What stuns us into a realization of our supersensible destiny is not, as Kant imagined, the formlessness of nature, but rather its unutterable particularity; and most particular and individual of all natural things is the mind of man. That is incidentally why tragedy is the highest art, because it is most intensely concerned with the most individual thing. Here is the true sense of that exhilaration of freedom which attends art and which has its more rarely achieved counterpart in morals. It is the apprehension of something else, something particular, as existing outside us.

The best thing, Murdoch says, for "stun[ning] us into a realization of our supersensible destiny" is not the "formlessness of nature" but the "unutterable particularity" of "the mind of man." Looking at Glen Coe in solitude is not enough for arousing visceral awareness of my own transcendent value; I need to engage with the particularity of other minds. But why would that be? Murdoch's allusion to the "exhilaration of freedom which attends art" suggests an answer. The "stun" is occasioned by something like the free and imaginative contemplation

that characterizes aesthetic experience. If this is right, then Murdoch evidently thinks that the deepest or most acute episodes of this kind of contemplation are in response to the “mind of man.”

But why would the mind of man be such an effective inspiration? Murdoch says it is because the mind of man is so “unutterably particular,” but I don’t find the concept of particularity very helpful. There is a much better explanation for why the mind of man—or, more accurately, humanity—is so apt an object to inspire these imaginative activities: because it is truly, metaphysically infinite. Glen Coe is merely suggestive of infinity. It is big and varied, but it is ultimately a finite amount of earth arranged in a finite number of shapes. And so even if individual intuitions of Glen Coe overwhelm my personal cognitive capacities, I remain convinced that the scene could, in principle, be brought to heel by human cognitive powers. Humanity, on the other hand, *really is* infinite. This means that any finite attempt to come to grips with humanity in the way we come to grips with a work of art—any interpretation, explanation, or prediction—is doomed to failure.

Grasping this fact inspires a two-sided revelation. We recognize the infinitude of the other person in the inadequacy of any finite engagement with their humanity, and we recognize our own infinitude in the indefinite extensibility of that engagement.¹⁵ On my rendering of Murdoch’s hypothesis, then, the only way for me to grasp my transcendence is to wrestle with yours. I recognize my infinite nature through the exercise of my capacity to plumb your infinite depths.

We can even capture the final piece of Murdoch’s picture if we define love in the right way. “Love is the extremely difficult realization that something other than oneself is real,” she says. What does “real” mean? I’m not sure, but why not read it as “metaphysically infinite”: love is the realization that something else is *like me* in all those respects that constitute my “true infinity.” It is self-sufficient, autonomous, creative, and free.

Recall our question: Why would I feel elevated by the recognition of someone else’s transcendence of price? If the thought we find in Murdoch is true, then we have an answer. My transcendence of price becomes viscerally clear to me only as part of an appreciation of another’s transcendence of the same. The feeling of superiority over the world of things is possible only through love of another individual; it is, of necessity, a feeling of *shared* superiority.

When this feeling is suitably joined to the complementary feeling of humiliation described above, the result is the feeling of loftiness that we call the sublime. The appropriate response to the infinite value of a person is to feel both pleasure in the superiority you share with that person and humiliation in the inadequacy of your pricing activities to that value. This of course is not to offer any rules or formulae for acting in response to this value. But that is the point. The proper experience of the value of humanity is one of being overwhelmed, of

being wrenched from our workaday practices of valuing, and we should hardly expect a rule to capture this.¹⁶

Notes

1. Stump's speech seems indebted to Kant's remarks at *Groundwork* 4:434–436. References to Kant use the volume and page number of Kant 1900–.
2. For a different way of setting out this kind of argument see Walden 2020. There I suggest a way of elaborating Kant's compressed argument at *Groundwork* 4:436: “[N]othing has a worth except that which the law determines for it. The legislation itself, however, which determines all worth, must precisely for this reason have a dignity, i.e., an unconditioned, incomparable worth.”
3. Also see Kant's claim that my rational nature “infinitely raises my worth” in the *Critique of Practical Reason*, 5:162.
4. This argument has obvious affinity for the “regress on the conditions of value” argument that Kant makes at *Groundwork* 4:428. The principal difference is that I'm interested not in whether humanity has unconditioned or intrinsic value but in an ordering relation—in whether the value of persons is greater than or equal to the value of things whose value depends on their relationship to persons. There is a common objection to Kant's argument that does have apparent force against the principle I call Superiority. The cure for the Red Death is valuable to me. This value is conditioned on my having the Red Death, but this affliction is certainly *not* valuable. My reply to this objection is that my having the Red Death is not a value condition in the sense I specified, but one of the nonnormative facts that explains *why* something else is a value condition. In this case, that something else is my health.
5. This distinction and its enduring role in the history of philosophy is the subject of Moore 2001.
6. I've removed Moore's citations of Kant.
7. I am going to gloss over the fact that Kant says our invisible self is “personality,” not “humanity.” On the difference and its implications for understanding Kant's claims about value, see Dean 2006.
8. The Categorical Imperative is not such a limitation, but a codification of the form free valuing must take.
9. This is close to Galileo's (1914, 31ff.) own diagnosis.
10. Though I don't pursue the possibility here, there are reasons to resist Cantor outright. See Whittle 2015.
11. *Mitteilungen zur Lehre vom Transfiniten* (1887), quoted and translated in Jané 1995.
12. But see Walden (2020) for a modest attempt along these lines.
13. See *Critique of Judgment*, 5:255.
14. This pain will be closely related to the pain we experience when the moral law “strikes down self-conceit”; see *Critique of Practical Reason*, 5:73.
15. This claim of course bears some similarity to a thesis more closely associated with Fichte and Hegel than with Kant, that I am able to construct, constitute, or posit

myself only through recognition of others. One philosopher who connects this idea with the infinite is Emmanuel Levinas. He says: “To approach the Other in conversation is to welcome his expression, in which at each instant he overflows the idea a thought would carry away from it. It is therefore to receive from the Other beyond the capacity of the I, which means exactly: to have the idea of infinity” (1969, 51). I don’t know exactly what this means, but I think I agree.

16. I am grateful to Sarah Buss for discussion and comments on a draft of this chapter and to Alice Phillips Walden for discussion.

References

- Aristotle. 1983. *Physics Books III and IV*. Translated by Edward Hussey. Oxford: Oxford University Press. [Cited by book and chapter]
- Dean, Richard. 2006. *The Value of Humanity in Kant’s Moral Theory*. Oxford: Oxford University Press.
- Galileo Galilei. 1914. *Discourses and Mathematical Demonstrations Relating to Two New Sciences*. Translated by Henry Crew and Alfonso de Salvio. New York: Macmillan.
- Jané, Ignacio. 1995. “The Role of the Absolute Infinite in Cantor’s Conception of Set.” *Erkenntnis* 42 (3): 375–402.
- Kant, Immanuel. 1900–. *Kants gesammelte Schriften*. 24 vols. Edited by Königlich Preussische Akademie der Wissenschaften zu Berlin, Deutschen Akademie der Wissenschaften zu Berlin, and Akademie der Wissenschaften zu Göttingen. Berlin: De Gruyter.
- Levinas, Emmanuel. 1969. *Totality and Infinity*. Translated by Alphonso Lingis. Boston: Kluwer.
- Moore, Adrian W. 1988. “Aspects of the Infinite in Kant.” *Mind* 97 (386): 205–223.
- Moore, Adrian. W. 2001. *The Infinite*. 2nd ed. London: Routledge.
- Murdoch, Iris. (1959) 1997. “The Sublime and the Good.” In *Existentialists and Mystics*, edited by Peter Conradi, with a foreword by George Steiner, 205–220. New York: Penguin.
- Velleman, J. David. 2015. *Beyond Price*. Cambridge, UK: Open Book.
- Walden, Kenneth. 2020. “Incomparable Numbers.” In *Oxford Studies in Normative Ethics*, vol. 10, edited by Mark Timmons, 106–130. Oxford: Oxford University Press.
- Whittle, Bruno. 2015. “On Infinite Size.” In *Oxford Studies in Metaphysics*, vol. 9, edited by Karen Bennett and Dean W. Zimmerman, 3–19. Oxford: Oxford University Press.