Dear Jan:

Reading and rereading your books and then reading them again has kept you comfortably in my thoughts these past years. How could it be otherwise, my friend, when the rise and fall of your thinking, the topography, say, of your imagination answers so closely to the contours of my own?

What follows is the letter I have been going to write you ever since your first visit to the Clearwater Valley back in 1999. That I haven't gotten around to drafting it before now has partly to do with a disinclination on my part to write long letters, but mostly it's because a decade, more or less, seems to be the interval I've needed to rehearse into words some things I've been wanting to tell you ever since our day together on the mountain. And though the rehearsing, so far as I can tell, is now behind me, and though this letter, as you can see, is finally under construction, even now I find myself uncertain how much of what I want to say has or hasn't been said or, indeed, even if it hasn't, how much of it will interest you. One thing, however, I do know: no naturalist, no lichenologist, and certainly no self-appointed inspector of deer trails has ever traveled down the path I'd now like to walk with you.

For me, Jan, your writings derive their authority from the deftness with which you build a sense of the relational, how you shuttle to and fro, like a pianist doing scales, across different conceptual landscapes. I'm reminded how in conversation you and I have often had to smile at our shared compulsion to editorialize, contextualize, reconstitute our thoughts — even as we utter them. On the surface this could look, I'm sure, like some personal tick, some benign form of mental illness. But at
a deeper level, it surely has more to do with our shared sense that no single perspective ever carries one very far; that things, to be understood deeply, need to be thought about resonantly, from as many points of view, from as many contexts, or, in my profession, from as many temporal and spatial scales as possible. Which brings me to my reason for essaying this letter, namely to situate in deep evolutionary perspective your own thoughts on the perplexing question of metaphor.

Metaphor, says my Webster’s New World Dictionary, is “a figure of speech in which a word or phrase literally denoting one kind of object or idea is used in place of another to suggest a likeness or analogy between them” — as in the university of deer trails. I think you’re right to insist on the signal place of metaphor in human communication; and I applaud your assertion that philosophers have done nobody any good by dismissing this portion of human experience as somehow beyond — or do they imagine it’s beneath — the compass of serious philosophical enquiry. A quick check under “m” in Ayer and Grady’s Philosophical Quotations confirms what you say; and while I do find several entries under what I take to be the related term cognition, a summary reading even of those could bring one to the rather unsatisfactory conclusion that philosophers had hitherto perceived cognition merely as some sort of glittering substance best described in terms of the light it reflects; far be it from philosophy to report on what metaphor — cognition on amphetamines — feels like, or even less to consider what our capacity for metaphoric experience must actually be.

If you look hard enough, and long enough, the human condition, so called, finally resolves to what I believe it really is: an outward, multifaceted manifestation of all those hand-me-downs, compulsions, demons without names — of a million years, maybe more, of tribal living, and then seventy-odd million years before that of life in the primate lane, then another ten million years with the precursors of rodents and rabbits,
and so on back and back and back until only our genes remember; and that somewhere buried under all that evolutionary sediment is the origin of metaphor. But best not to close in too early on the vista at the end of the trail. For now, my friend, let me slacken the pace a bit, play dutiful trail guide, the park naturalist I once used to be, and call to your attention a few of the more intriguing prospects hereabouts. Conceptual waypoints, if you will.

WAYPOINT 1. Progress to date on the molecular tree of life confirms what most biologists have suspected all along, namely that all of the 10 to 50 million species inhabiting Earth today trace their ancestry to a certain unspecified microbe that somehow burst on scene some 3.8 billion years ago. (For the record, sexually reproducing multicellular organisms appeared about 2.6 billion years later). So the verdict, I guess you could say, is finally in: every living thing extant on Earth today must ultimately be related to every other thing that has ever lived or that probably will ever live on this planet, regardless of size, stripe, or affiliation. We are all kith and kin.

WAYPOINT 2. To be aware that all life forms are cut from the same cloth is one thing, but to be able meaningfully to describe the life force behind the cloth is quite another. On this point, scientists have little to say. Not that this need surprise. Scientists qua scientists are by definition obliged to restrict their attention to the kinds of things about which testable hypotheses can be generated. Luckily for the human soul, most of the rest of us labour under no such limitations. For most of us the world — let’s face it — is magic. Not only has the universe magically contrived to pull us, like some more-than-willing rabbit, out of the top hat of existence. Not only has it handed us a kind of epistemological mirror in which we seem to see our own quivering faces magically reflected. Even more than this, the
universe comes dressed in what I like to think of as a kind of magic realism: a narrative form more or less intelligible to all, by means of which the universe seems to be trying to tell us something important — mostly about us, but nowadays also partly about itself too. “The most incomprehensible thing about the universe,” said Einstein, “is that it is comprehensible.”

WAYPOINT 3. Most magical of all, of course, is life itself. I’m guessing the closest we humans are likely to come to explaining life to ourselves is to think of it either religiously (God as the great mysterious Sky Turtle upon Whose broad carapace the world is perpetually balanced) or metaphorically, that is, to relate life to some aspect of our existence seemingly more comprehensible. As a naturalist, I find the latter approach more interesting; and applying it to the question of life yields two familiar options. Life as breath, for one. Life as fire, for another. Many religious traditions identify life with breath — here think animus, spirit, divine inspiration — but in fact only a small subset of living things engage in what we humans would call “breathing.” Fire, by contrast, is universal. Every living thing necessarily engages in metabolic process; and what is metabolism if not physiological burning carefully controlled: a kind of pale Nabokovian fire: a flame that burns slowly away inside the objects its burning somehow animates.

WAYPOINT 4. You’ll see immediately where I’m going with this: fire is as much a temporal phenomenon as a spatial one, as much process as thing, as much verb as noun; and so, no doubt, is life. Great view, no?

WAYPOINT 5. Here we’ve arrived already at Darwin’s theory of evolution: the notion that life forms — species if you prefer — aren’t really about form at all; rather they’re about transformation: this relentless process of becoming: this never-ending
inevitable metamorphosis from form to form to form. On this point, at least, all reputable scientists agree: that while evolution, at a molecular level, is propelled mostly by genetic mutation and genetic drift, yet what counts most at the level of outward form is the differential survival of morphologically diverse individuals in the face of ever-changing environmental pressure: the survival, so to speak, of the fittest. And this, too: that evolutionary process, once initiated, continuously introduces change, and hence necessarily generates the same competitive pressures that ultimately propel it forward. Evolution is thus its own driving force. Change, so far as we can tell, is the only river life knows how to swim in.

**Waypoint 6.** Change, of course, involves beginnings, and beginnings endings — as witness our own rather poignant progression from cradle to grave. Evolutionary biologists estimate that roughly 99% of all life forms that have ever existed on Earth are now extinct, the great majority having vanished without issue: dead ends in the evolutionary record. Of those lineages that still do exist, all owe this status to two properties: good luck and a preternatural ability to change shape more or less in lockstep with changing times. As a rule, the requisite shape-shifts are accomplished not as great leaps forward — frogs into princes — but rather as innumerable baby steps imperceptibly taken. What look to us today like unrelated species — butterflies, potted petunias, great blue whales, schistosomes, question-able rock frogs — are the business end of lineages that when traced backward finally merge into said microbe of 3.8 billion years ago.

**Waypoint 7.** The world, of course, is much more interesting than this suggests. Every so often the smooth, steady, onward flow of evolution gets punctuated, perturbed and ultimately redirected by some imponderable, complexity-driven, gob
smacking step-shift from one mode of existence to another. Examples aren’t hard to come by. Life is a good one. So are life’s respective step-shifts to cellularity, ecosystem, the eukaryotic cell, multicellularity, cognition, and meaning. What all these step-shifts have in common is the introduction of ways of being that could never have been predicted prior to their having evolved. Scientists like to refer to such events as “emergent,” but practically speaking they might as well be thought of as magic. For me they can be conveniently thought of as successive membranes that layer by layer encompass the progression from what was to what is. Though scientists have gotten pretty good at thinking about the processes that unfold within each successive membrane, they have had to leave the membranes themselves pretty much alone, referring to them with a wave of the arm as instances of emergence (magic), then moving on to something they can sink their methodologies into.

 Waypoint 8. Here consider the curious observation — from physics, this — that the universe at any particular scale unfolds not so much as a simple replacement of parts, nor indeed as a strict replication of what has gone before. It unfolds, rather, in fractal fashion: a replicating process of self-similarity, its basic assembly rules repeating themselves again and again. Not so much in the manner of nested Russian dolls — the clunky basis of most human classification — but more like the dendritic patterns formed by the distributaries of a river system. Or a vascular system. Our own, for example. Thus you could even say it is written in our very veins: that the present, far from being disconnected from the past, is continuous with it, indeed is inextricably embedded within it. By way of example, witness the spectacular progress our friends in biology are now making toward a fully parsimonious, gene-based reconstruction of the “tree” of life. All of us come out as kith and kin: the giant tree in the cedar grove, the spotted owl lately settled on one
of its lower branches; the bacteria now converging on the red-backed vole that only moments ago took up residence in the owl's large intestine; the up-and-coming forester who tomorrow morning, just before lunch, will sign into law the cutting permit that later this summer will put an end to all this: all of us are simply the most recent manifestation of a life force that has been tracing Mandelbrot doodles in DNA across the face of this planet time out of mind.

Waypoint 9. This little story of connectedness I've just alluded to in fact represents a recent major breakthrough in scientific knowledge — in this case a breakthrough happily congruent with our deepest intuitions. But let's make no mistake: not all major scientific breakthroughs are intuitive; far from it. Nor is it clear just how many major scientific breakthroughs (think Darwin, Einstein, Watson and Crick) are still waiting to be made. Yet after three centuries of rapid-fire breakthroughs, one following closely upon the heels of the last, suspicions are beginning to mount that we may be closing in on the limits of human knowledge. Two reasons here. First — which is trivial — because we seem destined to blow ourselves up long before we get around to knowing all we can know. And second — which is profound — because even if we somehow miraculously manage to keep our finger off the button, there are still many things that we as humans simply cannot know. I don't mean by this that there are no major scientific discoveries left to be made, rather I mean that whatever discoveries are left to be made are unlikely greatly to alter the shape of what biologists, physicists and other scientists already think they know about the universe and our place in it.

Waypoint 10. For me this possibility is frankly bracing. It suggests, for example, the feasibility of roughing out a durable worldview: a profound, meaningful, deeply contextual creation
myth, say, that some day may help focus human striving on some single earnest objective common to all — staying alive, for instance. At the very least, it invites us to rethink the human condition in light of findings largely beyond the imaginative compass of our fathers, and of the fathers who came before them. From this, two things. First we’ll need to play down our seemingly primal assumption that the world can be understood through the application of raw intellect to direct sense perception; and following from this, that the universe — and our place in it — in any way resembles what hitherto it has seemed to us to be. And second — and this is truly the hard part — we’ll need to acknowledge the exceedingly strong possibility that those who have come before us — the mystics, the great prophets, the religious visionaries, the great philosophers — have mostly got it wrong. They have largely failed, that is to say, to formulate a worldview in the least congruent with the vista now laid out before us by three centuries, more or less, of careful scientific probing.

**Waypoint 11.** Let me rephrase that. What I actually wish to say is that human understanding, ever since its inception, has had much readier access to how the world seems (beautiful, meaningful, value-laden, god-given) than to how it most probably is (relativistic, scale-dependent, evolution-driven, godless). Only in comparatively recent times has our access to the latter kind of knowledge improved to the point of putting seriously into doubt the factual basis of the former. Nowadays one often senses a palpable tension between those who place their deepest faith in what seems and those who give pride of place to what most probably is. This is understandable. What seems has been the majority way of knowing for thousands of years of hallowed human history; no wonder most of us find ourselves reluctant to give it up. Nor, in my opinion, should we; nor, indeed, could we let go of it even if we wanted to. To acknowledge that what
seems is really just another way of saying how it feels to be human is on no account to detract from the soul-giving centrality of what seems; and though some cynics may argue otherwise, I for one am still waiting for the least shred of evidence that scientists, for example, are somehow less human than other members of our species; and seeing none, I’m ready to move on.

WAYPOINT 12. So this, then: humans are not spontaneous generation. We’re mistaken if we imagine the human condition can rightly be understood separate from the myriad forms our lineage has passed through en route to being embodied, for now, by whoever and whatever it is we happen lately to be. The key to understanding the “demon-haunted” human mind is only partly to be found in those accounts of wars, revolutions, divine testimonies, reformations, and other tribal narratives we so compulsively cart around with us. If we wish to understand ourselves, we need to look much farther back—say to the plush, textured narratives of those creatures whose ancestors, at some point, were also ours: the consciousness of sponges, the sexual imperatives of snow fleas, the curiosities of gray jays, the reciprocities of chimpanzees, the empathies of bonobos, the incessant chatter of verdons. Having read backward into the past, the trick, of course, is to read forward again with the godlike knowledge of hindsight, the better to infer what physical and, in the case of our primate relatives, psychic attributes present in our own species must already have been in place when their ancestors and ours first began to go their own separate ways.

WAYPOINT 15. Apply this evolutionary perspective to metaphor, or rather to our experience of metaphor, and the view is suddenly very fine, as is befitting this endpoint of our journey, this Isle of Sky. From an evolutionary perspective, metaphor can hardly be some Johnny-come-lately adjunct to spoken
language. On the contrary, it has all the shared, unspoken, between-the-words comfortablenesses of a very early entry into our evolutionary lineage. In a sense, metaphor carries us home, to our deep evolutionary selves. I’m prepared to wager that metaphor takes us back to a quality, a manner of experience familiar to the creatures that embodied our lineage long before we came on scene with our words and syntax, long before our predecessors had discovered the delicious expressive power of vocalization, body language, gesture, or indeed any mode of communication beyond the basic need to compete and reproduce. Perhaps, in a sense, metaphor at its most basic is something like what the mosquito knows, say in the moment it takes wing, the human hand lately raised to swat it. What the mosquito knows is not that that hand is a hand. Far from it. Yet the mosquito clearly knows something urgent, indeed very urgent indeed, which is precisely how it is that mosquitoes still inhabit this world.

I would thus argue that the experience of metaphor is non-verbal because the experience it refers to is pre-verbal. Sometimes at night I awaken to a strange sensation. It happens only when I find myself in a fetal position. The sensation I speak of has roughly the shape of memory, but certainly it’s not a memory of the usual kind. All I can tell you is there’s this sense I have: my left hand holding onto something larger than my thumb and forefinger can quite reach around, some thing unseen — perhaps unseeable — there right in front of me — and this a sensation I have awoken to not once but dozens of times. What I think I’m experiencing is a pre-natal memory, perhaps some recollection of having got hold of the umbilical cord, but certainly not a memory like any other memory I could name.

In my view, metaphor is like that: it carries us back to ways of being that have long ago been obscured, though not entirely
erased, by evolutionary overlays. Metaphor is about knowing the universe to oneself. Not about awareness per se, at least not in the sense that a tree or a mushroom is aware. Rather it is about contextualized awareness, call it awareness of awareness; and as such, it can only have arisen with the evolution of a central nervous system and, with it, the emergence of a sense of self. Whatever the mosquito knows, it knows because like us it happens to be in possession of a “brain.” Surely it was the emergence of mind in the context of brain that introduced into the universe the capacity for meta-phoric experience: the experience, that is to say, of the world as other. Prior to that signal event, one imagines life interacting with what is as mere response to direct stimuli, be it chemistry or temperate or water relations or what have you. Such, I think, is the natural history of metaphor.

To be human is to be tribal, and hence to live within the interstices of the stories we compulsively tell one another. Naturally the particulars of these stories change over time, presumably in tandem with shifts in our tribal preoccupations. Every so often, however, our stories change also in shape, as we ourselves step-shift to some new level of awareness. I believe such a step-shift is now upon us — indeed you yourself could fairly be said to number among its vanguard. As near as I can tell, the coming change has to do with a movement away from mere top-down — as in headquarters, university, patriarch, the one god — and bottom-up — reductionism, atomism — stances toward knowledge and value, in favor of dynamic combinations of both — as exemplified, I think, by your predilection for shifting back and forth across different perspectives.

To look out on the universe not merely as endpoint, culmination, stasis, but also as becoming, emergence, process. To behold a deer, say, or a mosquito, or that image in the mirror, and see the latest outward (physical) and inward (psychic) manifestations of processes that have been ongoing all these billions of years.
Viewed thus, the human condition can be seen as an amalgam of evolutionary hand-me-downs — dreams, compulsions, demons without names — bequeathed to us by a million years, maybe more, of tribal living, preceded by 70-odd million years of life in the primate lane, then another 10 million years with the precursors of rodents and rabbits, and so on back and back and back until only our genes remember. And this: that buried somehow beneath all this evolutionary sediment is the origin of what we experience as meaning, the great step-shift to what we refer to as metaphor, and the opaque emergent membrane through which the human mind — the human mind above all — is unlikely ever successfully to peer.

I’m guessing that philosophers, poets, and artists will do well to follow your lead into resonant thinking — extended, I hope, to include the temporal axis of evolution. What I refer to of course is deepening acceptance of ourselves both as a species and as the universe attempting to understand itself. My reasons for so hoping are twofold. First because only by embracing the newly emerging creation myths now being passed around the campfires of academia, only in coming to terms with those particular wonder tales, only thus are philosophers, poets and artists likely eventually to reclaim some sort of deep social relevancy — if only as dutiful trail guides to a civilization travelling blind. And second because the larger contextual perspectives awaiting us are precisely the kind of emergent understandings that arise when things are put into unfamiliar juxtapositions: which is the experience of meaning as we have always ultimately experienced it, that is, as unutterably, intractably metaphoric: the silence between the words.

I hope this letter finds you well, my friend. Orca sends her love. So does the mountain. So do I.