

Overture

The greatest mysteries are those we are most likely to overlook, because they are the ground on which we stand when we puzzle over things that surprise us. Chief among these is the very fact – though “fact” is hopelessly inadequate – that the world makes sense to us. As Einstein observed, “the eternal mystery of the world is its comprehensibility”.¹

A couple of decades earlier Einstein believed he had come close to fulfilling the Pythagorean dream of discovering the mathematical structure of the natural world – of space, time, and the entities occupying or taking place in them – and rendered the material universe transparent to thought. His euphoria was short-lived. Quantum mechanics – a seemingly unintelligible but immensely powerful way of describing the physical world and an incompatible complement of general relativity – came to occupy more and more explanatory space. Nevertheless, Einstein’s surprise, and delight, his wonder, remain valid: even the partial intelligibility of the world is mystery enough. The conflict between these two spectacularly successful theories did not make their theoretical and practical potency any less astonishing.

That the world makes sense and we make sense of the world and of ourselves in the world whose givens impose a kind of sense on us is a many-layered miracle. Even those who do notice it – artists, theologians, philosophers, scientists – do so only intermittently. Typically, it is the (local) *failure* of sense that provokes us into thought. Otherwise we are too complicit in the necessary assumptions of common sense, paying sufficient attention to get by but not enough to see the extraordinary stuff out of which its fabric is made. We rarely wake to the miracle of our wakefulness and the possibility of waking out of it to some more illuminated state.

Of course, if we did not make moment-to-moment sense of what was going on around us, there would be no “us”. Inhabiting an entirely unintelligible world in which nothing could be understood, anticipated, or acted upon with reliable consequences, would be incompatible with inhabiting.

But there is no “of course” even about this. That human existence *requires* a more or less intelligible world simply moves the mystery on. After all, the vast majority of organisms flourish – and act, or at least react – without making sense of the world in the way that we humans do. That A is explained by B is not the kind of thing that bacteria (by certain criteria the most successful organisms) entertain; and at a higher level, the laws of nature as we understand them are beyond the cognitive reach of all but a small subset of *H. sapiens*. Human flourishing has not for most of the history and prehistory of humanity depended on the kind of gaze that could discern laws connecting the fall of a cup off a table with the clockwork of the solar system, or a theory that folds the gravitational field into the structure of space-time. Man-the-sense-making-animal therefore remains deeply mysterious and Man-the-Explainer or would-be Explainer of the universe – *H. scientificus* – doubly so.

Let us unpack this a little. We live in a world in which happenings seem to be explained by other happenings: “this happened because of that”. We not only observe causes but actively seek them out. We also note patterns, connect and quantify those patterns, and arrive at the natural laws which have proved so empowering, enabling us to predict and manipulate events, to work with and around them, in pursuit of our ends. All of this takes place in a boundless public cognitive space, draws on a vast collective past, and reaches into an ever-lengthening and widening future.

Observed patterns may be exploited as rules to guide or permit effective action. Sense-making makes what happens into a nexus of norms and norms seem to prescribe what *should* happen: they are quasi-normative. There is surprise, even outrage, at the unexpected, as if the material world *ought* to observe its own regularities, notwithstanding that there is no ought in nature.

The extraordinary character of man, the sense-making animal may be highlighted by contrasting the direct and limited “epistemic foraging”² of a beast looking for the origin of a threatening signal with a team of scientists listening into outer space to test a hypothesis about the Big Bang, having secured a large grant to do so.

The reference to astronomy suggests another way of coming upon the miracle of our sense-making capacity: our ability to discern the laws informing a universe that far outsizes us. You don’t have to identify the human mind with the human brain to be legitimately astonished at the disparity of size between

the knower and the known, between what we physically are and what we know. Consider the relative volumes of our heads (4 litres) and of the universe (4×10^{23} cubic light years). In these less-than-pinprick bonces, closer to the size of the atom than to the size of the universe, the universe comes to know itself as “The Universe” and some of its most general properties are understood.³ The mystery is beautifully expressed by the American philosopher, W. V. O. Quine when he describes his attempt to explain: “how we, physical denizens of the physical world, can have projected our scientific theory of that whole world from our meagre contacts with it: from the mere impacts of rays and particles on our surfaces and a few odds and ends such as the strain of walking uphill”⁴

That our knowledge and understanding are incomplete does not diminish the achievement. It hardly matters how precise are the figures we arrive at regarding the size or the longevity of the universe. The question “what kind of being must we be to be mistaken over *this*?” is as compelling as the question “what kinds of beings could arrive at this kind of knowledge?”. What knower could house gigantic ideas such as “the universe” or (come to that) “life”? These items do not deliver themselves prepackaged as mind-sized miniatures. The cognitive depth these ideas require of us is the same irrespective of whether we have religious or secular outlooks; whether we believe the universe was made or just happened; whether its unfolding is postulated to be driven by a deity or by an intrinsic momentum of change; whether its necessity is represented by mindful Fates or by mindless laws and causes. “God” does not make the order of the universe and our capacity to grasp it any more probable. It is simply another name for that improbability, as we shall investigate in Chapter 2.

Indeed, the intuition that our knowledge is bounded by ignorance, that things (causes, laws, mechanisms, other galaxies) may be concealed from us, that there are hidden truths, realities, modes of being, has been the powerful motor of our shared cognitive advance. We are creatures who cultivate doubt. We have the extraordinary capacity to infer from a mistake in one instance the possibility of being mistaken in a whole class of cases. This, at least as much as our habit of (provisional) generalization and our uniqueness as “the measuring animal”, should astonish us. So, too, the fact we can tolerate the extraordinary state of affair that as our knowledge grows, we ourselves, as the objects of our collective knowledge, shrink: our tiny bonces, in galaxies light-years in diameter.

The headline achievements of the human mind, however, are built on lower-level sense-making capabilities that are no less remarkable. Scientific

inquiry and religious or philosophical speculation are the upper storeys of a mode of consciousness that is awake to a world other than itself. Perception discerns objects that it senses as being incompletely revealed, that it intuits as having intrinsic properties such as density or microscopic structure, operating in the absence of consciousness. Our everyday consciousness inhabits a realm of knowledge and reasons and words that transcend the material circumstances of the human organism. We are aware of *truths* singular, particular, general, universal, and of the perpetual possibility of getting things wrong.

There is a spectrum of sense-making, ranging from wondering what caused that noise over there, to what shapes the order of things, leading up to the ultimate question of why there is anything rather than nothing. The speculative and spectacular sense-making of the scientist is rooted in a many-layered soil of everyday making sense of ourselves, expressed in the coherence of the succession of moments, the narrative of our lives, our plans, supported by the “artefactscape” in which we pass so much of our lives. There are important differences, however, as we shall discuss.

Sense-making is not the product of the individual mind, although this is where it has ultimately to be registered or indeed realized. It is fashioned in the boundless community of minds, woven out of the explicitly joined attention we pay to the world, shared through a trillion cognitive handshakes, overwhelmingly mediated by the languages – words, non-verbal signs, and artefacts – that constitute the fabric of intelligible, known reality.

The present volume is not an exercise in Cartesian “systematic doubt” or in Cartesian certainty, but in surprise; in cultivated, organized, even systematic surprise. It does not provide many answers: it is closer to “Oh!” than to “QED”. The exploration will in many places merely be reminders of what we all know about our knowledge. While it will be structured, the structure will be imposed on something that is intrinsically unstructured. What is on offer is not an explanation but merely a description one of whose chief aims is to reinforce resistance to an unsurprised reductionism. The inquiry into how it is we make sense of things seems always to lead on to higher-order sense-making that requires explanation.

Chapter 1 “Seeing the Sense-Making Animal” attempts to scope the territory. I will trace some of the paths between sense-experience and the higher sense-making Einstein felt to be mysterious. The chapter shall not follow the conventional curriculum of theories of explanation and philosophies of science. I shall not separate and adjudicate between teleological (“to what end”), functional (“serving what function”), reductive (“A boils down to B”), and psychological explanations of phenomena. Nor shall I examine the relations

between the invocation of causes, laws and entities such as elementary particles and forces, as instruments of sense-making. Nor, again, shall I discuss the relationship between the explanatory power and truth of explanations, or the contrast between anti-realist and realist accounts of explanation. This is not only because I have nothing original to say about these matters but also (and more importantly) because the purpose of this chapter is to dig into the many layers of cognitive soil out of which particular and general explanations arise.⁵

In the next chapter, “*Logos: A Brief Backward Glance*”, I will glance at a few of the most influential prescientific stories humans have told themselves in their endeavour to make sense of the fact that the world is to an astonishing degree intelligible to us. My potted, potholed, history will be anchored to a term that seems to gather up much that is central to our inquiry in its voluminous denotative and connotative folds: *Logos*.

The next two chapters look at two ways of accounting for our ability to make sense of the world. In Chapter 3 “Deflating the Mystery 1: Putting the World Inside the Mind”, I examine the idea, most closely associated with Immanuel Kant, that we understand the natural world because the laws of nature that structure our experience originate *within* our understanding. In Chapter 4 “Deflating the Mystery 2: *Logos* as Bio-*Logos*” I offer a critical examination of the contrary view: that the world is amenable to our understanding because understanding has been shaped by the material world in such a way as to ensure our survival.

Having set aside these attempts at demystification I return to the task of clarifying the challenge of making sense of the fact that the world makes sense. Chapter 5, “The Escape from Subjectivity”, highlights the perspectival and parochial nature of the awareness from which understanding necessarily takes its rise, given that we are embodied, and the miracle of our transcendence of those limits. This sets the scene for the examination in Chapter 6, “Thatter: Knowledge”, of the essential nature of knowledge and the realm of “thatter”, in which we are immersed and in relation to which we conduct much of our lives. The very nature of knowledge presupposes, at least on a realistic account, that it is about something other than, and independent of, itself. Consequently, there has to be an irreducible gap between our minds and the universe of which we are mindful. The gap is between two relata: the knower and the known. Chapter 7 “Senselessness at the Heart of Sense” examines the necessary residual opacity in the two protagonists. The final chapter “Towards a Complete Understanding of the World?” gathers up several threads of the inquiry. It problematizes the idea of progress in understanding and addresses the inescapable limits to the intelligibility of the world. The

question of whether humanity cognitively advances by some absolute criterion remains vexed.

There are addenda to some chapters. Whether they are necessary elaborations, clarifications, or simply digressions will be for the reader to judge. The truth is that the topic does not have natural boundaries. As with other philosophical inquiries, its limits are imposed rather than intrinsic.

Two things will be apparent. The first is that it is not a work of scholarship, although it enters areas in which the primary, secondary and tertiary literature is enormous. Secondly, its aim is the relatively modest one of removing some of the barriers to seeing the mystery of our capacity to make sense of things and the mysterious fact that we pass our individual lives steeped in knowledge and understanding that, albeit incomplete, nevertheless far exceeds what we are or even experience; and, that collectively, we seem to have grounds for believing that we understand more of the world than those who came before us and who lived, as we still do, in a patchwork of ignorance and knowledge, confusion and clarity, nonsense and sense.