Our topics introduced. To be honest, the central concerns of this book—issues relating to the status of concepts, notions, properties, attributes, traits, characteristics and other notions of that ilk—have acquired a hard-won reputation for dullness, such that otherwise ardent students of philosophy frequently shun the subject as irrelevant to the normal run of human concerns. And the usual literature on the topic often confirms this somewhat leaden impression. I once received a new philosophical text on properties\(^2\) from a publisher that came accompanied by a fulsome blurb extolling its educational virtues: “Here is just the work,” some scribe from the Grub Street of textbook advertising wrote, “to fire the imaginations of all your undergraduates in your next philosophy class.” Inside I found a little box with the word “the” inscribed several times inside. “How many ‘the’ s do you think are in the box?,” the text asks and this query provides the sole motivation for the investigation of a lengthy sequence of rather bizarre (to my thinking) “theories of universals.” The enthusiast from the publicity department evidently believed that, in a classroom situation, some clever pupil will suggest the answer “One” and this startling proposal will ignite such heated debate that the entire class will

---

1 The Duke of Iron (Cecil Anderson), “Wide Screen,” Monogram Record M-934. I worry about this accreditation because Anderson often covered the compositions of other calypsonians. Indeed, W. V. Quine made the mistake of attributing his title From a Logical Point of View to Harry Belafonte, when the originating source (“Ugly Woman”) was composed by the Mighty Lion who never received adequate credit for his work (and made superior records to boot).

sit in transfixed attention throughout an entire semester. For myself, I would not trust my pedagogy to such a slender motivational reed.

In any case, I propose to investigate the problems of concepts and attributes in a different spirit. To me the most salient fact about such notions is that they frame the basic vocabulary through which we justify and criticize a wide range of human activities. As the celebrated Ludwig Wittgenstein writes:

*Concepts lead us to make investigations; are the expression of our interests, and direct our interests.*

For example, with respect to the appraisal of mathematical performance, we might variously declare: “Archie has never fully grasped the concepts of the calculus, so of course he can’t work the problems” or “Betty, on the other hand, has looked more deeply into its central notions and believes she has discovered a better way to work with these notions” or “Veronica maintains that Betty’s ways of reasoning cannot be justified according to the characteristics she has so far been able to articulate.” And so on, through many possible variations. Through such appeal to the proper content of sundry concepts we correct and steer onward our own projects and those of others.

I will call words like “concept,” “attribute,” “notion,” “property” and so forth terms of conceptual evaluation, for the simple reason that these provide the phrases we employ in everyday life to evaluate the degree to which we believe ourselves “conceptually prepared” to execute some prospective task or other (later I shall add “truth” and “validity” to the heap we consider, but for the time being the first faction will keep us busy enough).

The rub is that, in critical cases, the exact guidance supplied by a purported “concept” can prove less than clear—where do our judgments of “what concepts tell us” come from? On what grounds should we condemn Archie for not having “fully grasped the concepts of the calculus”? What little bird informs Betty that she has successfully “looked more deeply into the central notions of the calculus” than others? How should Veronica justify her claim that “Betty’s ways of reasoning cannot be justified according to the concepts she has been able to articulate thus far”? From what sources do these sundry judgments with respect to correct and incorrect application spring? We can easily imagine circumstances where any of our claims might prove controversial. What is it to “grasp a concept” anyhow?

---

Indeed, from the history of science alone, we can readily provide examples where confident appeals to “conceptual authority” have subsequently proved detrimental and unwarranted. Often the chariot of scientific progress might have rolled more swiftly onward if such specious forms of conceptual friction had not impeded its advance (indeed, my Archie, Betty and Veronica claims correlate neatly with certain unfortunate episodes in mathematical history to be surveyed in Chapter 8). Our basic human nature often seeks perches of unearned advantage from which we can lustily applaud our own endeavors while dismissing the divaricate proposals of rivals. Spurious appeal to the “proper content” of a concept can readily provide a dandy picket from which such lofty forms of intellectual sniping can be executed. The complaint, “Oh, you’re not using that concept quite right,” has so frequently served as a pretext for unearned privilege that we might easily succumb to cynicism with respect to all judgments of this nature.

Indeed, quite sweeping disparagements of the claims of “conceptual authority” have invaded the academic humanities in recent years, to generally deleterious effect (we shall examine a case in point in 2.v). Within this strain of self-styled post-modernist critique, most appeals to “conceptual content” are dismissed as rigorist shams, representing scarcely more than polite variants upon schoolyard bullying. Run-of-the-mill appeals to “conceptual authority” tacitly masquerade prejudiced predilection in the form of falsely constructed universals which, in turn, covertly shelter the most oppressive codes of Western society. But such sweeping doubts, if rigorously implemented, would render daily life patently unworkable, for we steer our way through the humblest affairs by making conceptual evaluations as we go. In what alternative vocabulary, for example, might we appraise our teenager’s failings with respect to his calculus homework? Forced to chose between exaggerated mistrust and blind acceptance of every passing claim of conceptual authority (even those issuing from transparent charlatans), we should plainly select gullibility as the wiser course, for the naïve explorer who trusts her somewhat inadequate map generally fares better than the doubter who accepts nothing. We will have told the story of concepts wrongly if it doesn’t turn out to be one where our usual forms of conceptual evaluation emerge as appropriate and well founded most of the time.

Of a milder, but allied, nature are the presumptions of the school of Thomas Kuhn, which contends that scientists under the unavoidable spell of different paradigms often “talk past one another” through their failure to share common conceptual resources, in a manner that renders scientific argumentation more a matter of brute conversion than discourse. We shall discuss these views later as well.

Although their various generating origins can prove quite complex, most popular academic movements that promote radical conceptual debunking of these types draw deeply upon inadequate philosophies of “concepts and attributes.” Such doctrines often sin against the cardinal rule of philosophy: first, do no harm, for such self-appointed critics of “ideological tyranny” rarely prove paragons of intellectual toleration themselves.
The classical picture of concepts. In contrast to these injurious critiques of conceptual authority, the analytic tradition in philosophy (a heritage to which this book largely belongs) has generally painted a rosier portrait of human capacity wherein the internal contents of traits are assumed to be both comparatively sharp and objectively assessable. “If they would only scrutinize their concepts rightly,” the analytical school contends, “Archie, Betty and Veronica should be able to sort out their squabbles definitively, for conceptual clarity is a sure path to unquestionable correctness.” As we shall see, such sentiments represent the natural development of the attitudes we manifest within the resolution of everyday conceptual problems.

To be sure, the optimistic and commonsensical assumptions of the analytical school are often articulated in terms that can startle the unprepared reader. For example, the nineteenth century German philosopher Gottlob Frege (a predecessor greatly cultivated within the analytical tradition) frequently evokes a hypothetical “third realm of existence” (that is, neither mental nor physical in nature) wherein the full slate of possible concepts and thoughts is supposed to dwell:

[Concepts] are neither things in the external world nor ideas. A third realm must be recognized. Anything belonging to this realm has in common with ideas that it cannot be perceived by the senses, but has in common with things that it does not need an owner so as to belong to the contents of his consciousness.4

Such passages, to put it gently, may strike the sober minded as odd or occult. Some of us, in nominalist reflex, may feel roused to the office of becoming Robert Ingersols of metaphysical excess, seeking to cleanse our intellectual landscape of the blight of mystical universals. Others may discern a converse duty to defend Frege’s redoubt of abstraction from attack by the excessively hardheaded (such are the crusades to which the man with the “the”’s in a box hopes to summon his audience).

However, in this book I suggest we resist such calls to ontological battle. Frege, in fact, was a professional mathematician greatly concerned with advancing his subject to a state of such perfect rigor that all of its results could stand as permanently unimpeachable. In the passage cited, shorn of Platonic metaphor, Frege simply articulates his strong conviction that (i) we can determinatively compare different agents with respect to the degree to which they share “conceptual contents”; (ii) that initially unclear “concepts” can be successively refined by “clear thinking” until their “contents” emerge as impeccably clear and well defined; (iii) that the truth-values of claims involving such clarified notions can be regarded as fixed irrespective of our limited abilities to check them. His peculiar talk of unearthly kingdoms, parsed sympathetically, represents little more than an appeal to our everyday faith that most conceptual disagreements can be definitively and crisply resolved through a diligent program of clear thinking. And, in the same tolerant spirit, every important thesis that Frege advances in “third realm”

guise can be easily restated within the homely vernacular of commonplace intellectual evaluation.

Such tempered replacements stand near the heart of what I shall call the classical picture of concepts in the sequel; it represents the general run of doctrines with respect to concepts that have proved the most widely shared across the historical spectrum of formally articulated forms of philosophical thinking. In truth, the most problematic aspects of this classical picture trace, not to its “wild ontology,” but rather to the manner in which we grasp concepts is there described: that Archie, Betty and Veronica differ simply in relating to the common concepts of the calculus according to different degrees of contemplative engagement. Purged of metaphysical metaphor, such assumptions should seem entirely plausible, bordering on the tautological and embodying scarcely more than the commonsensical attitudes we evince in our everyday weighing of conceptual authority. Has Archie truly mastered the calculus concepts? Is Betty’s claim of deeper insight sound? Is Veronica right to fault Betty’s appeals?

Indeed, within the most dominant portions of the analytic tradition, classical assumptions like (i)–(iii) seem so obvious that the prospective student of concepts quickly imagines that there is little to adjudicate beyond determining in what ontological dominion these gizmos properly sit. Since this task, as we’ve noted, can seem less than enthralling, many philosophers abandon this metaphysical chore to the specialists and pursue more gratifying forms of investigation.

I might indicate that, although I frequently cite Gottlob Frege in this book, I nevertheless regard the early twentieth century philosopher Bertrand Russell as a more perfect representative of the classical picture (Frege maintains an appreciable range of eccentric opinions that we needn’t explore here). Later, in an appendix to Chapter 3, I shall codify a lengthy list of the theses that I consider to be most characteristic of a classical point of view. Here Russell’s evocative Problems of Philosophy of 1912 provides our basic frame, although I have freely added some other popular claims not articulated in Russell when they help fill out the picture in natural directions (e.g., with respect to notions of possibility and possible world, about which Russell would have been personally dubious). However, I intend to cast the mesh of “classical picture” rather widely in this book and so allow our list to embrace popular opinions that differ from Russell’s own in some respects (he was much prone to changing his mind on some of our lesser topics in any case). We’ll be mainly concerned with the general tenor of the classical picture (whose foundations lay firmly planted in the soil of everyday, nonphilosophical thinking), rather than fussing extensively with every tenet in the compendium of classical themes that I provide in the appendix to Chapter 3. I formulate the doctrine in such lengthy terms mainly so that my intentions won’t seem intolerably vague when I write of the “classical picture.” At first glance, many of its contents should appear vapid truisms. In truth, they’re not; materials capable of tempting us into great foolishness (or worse) lie sheltered here. But the sum total, good and bad, derives entirely from the fabric of ordinary life. Why this happens is the primary subject of our book.

Conceptual evaluation. Few modern philosophers in the analytic tradition—and certainly no post-structuralists or Kuhnians!—will consider themselves advocates of such a classical picture (to be “classical” hardly sounds like being up-to-date). In some ways, such demurrals are correctly indicated; in others, rather confused. Let me therefore outline why we concentrate largely upon classical themes in this book, rather than turning forthwith to more revisionary accounts of these matters. It is easiest, I think, if I simply outline my overall appraisal of the intellectual circumstances in which we presently find ourselves, leaving the details to be filled in later.

1. We utilize terms like “concept” and “attribute” to profitably appraise and redirect the classifications, inferences, inventions and other projects we pursue in the course of everyday life.

2. In the course of so doing, we tend to form rough pictures of these evaluations that are too simplified to be entirely correct. However, for many relatively undemanding purposes, these faulty portraits do not impede the practical work we achieve speaking of “concepts” and “attributes.” A good analogy to this happenstance can be found in Isaac Newton’s experiments on the composition of light, where, with his prism, he believed he had decomposed daylight into its ingredient strains:

   And to the sage-instructed eye unfold
   The various twine of light, by thee disclosed
   From the white, mingling blaze.  

Although the underlying difficulties were not clearly recognized until the 1880s, this natural portrayal of what occurs in Newton’s investigations is quite misleading, for, in a very real sense, the light’s “components” are actually created within the prism or diffraction grating. That daylight has a preexistent spectrum is, nonetheless, a correct claim, but one that needs to be justified according to the rather surprising and elaborate statistical treatment initiated in the early twentieth century (this situation will be discussed again in 9, iii). Newton’s simpler picture approaches correctness closely enough that it can guide us adequately through many varieties of optical phenomena, to the extent that a neophyte may advance fairly far in her studies before she hears any whisper of the complex revised story. But eventually the day comes when she must plunge into more sophisticated waters.

The doctrines dubbed as the classical picture of concepts in this book largely represent the explicit codification of these sketchy pictures from ordinary life as explicit philosophical or methodological theses. For many purposes, they guide us ably, but, in delicate circumstances, we are easily led astray.

3. Accordingly, the unprepossessing term “concept” can sometimes play tricks upon any of us, even the most determinatively “unphilosophical.” In virtually every subject matter, seemingly plausible assumptions about the working basis of innocent-looking

---

words are capable of sending able investigators scampering away on the most quixotic of projects; folks who otherwise appear as if they haven’t a trace of ontological hankering in their bones. These misadventures do not trace to errant academic thinking; instead, there lie seeds deeply planted within the humblest forms of everyday thought that stand ready to sprout great globs of undesirable foliage if supplied the least encouragement. No husbandry from formal philosophy is required at all; misguided forms of conceptual appeal will readily blossom of their own accord. Like it or not, all of us must tacitly turn “philosopher” at certain stages in our endeavors and this is very much part of the story I wish to tell in this book.

(4) In the main, our familiar vocabularies of “concept,” “idea” and “trait” are nicely adapted to the sleepier lanes of everyday usage where pressures to innovate or explore unexpected pathways are not rudely demanded. But, as our everyday descriptive terms become pressed to higher standards of accuracy or performance, as commonly occurs within industry or science, a finer and more perplexing grain of conflicting opinion begins to display itself within our applications of “hardness,” “force” and even “red.” In truth, this same texture usually lies delicately embossed upon our more nonchalant patterns of classification as well, but the filagree is there more subtle and easier to miss. However, once this hidden weave is foregrounded, anomalies in reasoning become evident and questions of how we should proceed with our classifications become oddly perplexing.

In Chapters 6 and 7, I shall present a variety of related models (to be called façades or atlases) that attempt to articulate the pattern latent in some of these tacitly evolving patterns, as well as articulating theoretical reasons why they should be expected to emerge as a descriptive practice gains increasing practical success.

(5) Indeed, along a wide frontier, the late nineteenth century witnessed unexpected blossomings of descriptive disharmonies within both mathematics and the physical sciences that baffled traditional preconceptions with respect to methodology. It is common in popular histories to bundle these sources of puzzlement together under the heading “problems in the rigorization of science,” but this familiar categorization does not adequately recognize that many of these difficulties represent the emergence of the resistive grain I have just sketched.

(6) A general program for addressing these methodological concerns was then hammered out, based centrally upon the simplified pictures of conceptual behavior that were earmarked under (2), but now rendered explicit and formally “philosophized.” It is this family of articulated doctrines I call the classical view of concepts here (whereas the more diffuse everyday attitudes from which they emerge will be labeled as ur-philosophy). These classical proposals for making corrections in our intellectual course were quite optimistic in character, maintaining that any diligent thinker can, if she only sets her mind to the task, permanently avoid the strange conceptual snares into which scientific topics otherwise fall. It is within this nineteenth century context of response to methodological crisis that what I call the classical picture really comes to life and supplies a context where we can truly appreciate the practical work the approach intends to accomplish.
I should hastily add that most of the doctrine packaged into the classical picture is of a venerable philosophical vintage (much of it lies latent in Descartes or Locke, for example), but I consider that an important recrystallization occurred in and around 1900.

(7) By any standard, this classical synthesis should be regarded as a great tour de force. Although many nineteenth and early twentieth century authors participated in its development, I believe the Russell who wrote The Problems of Philosophy deserves much credit for articulating the nicest epitomization of the philosophical core of what constitutes classical thinking about concepts. And across of the wide swath of his other intellectual projects (e.g., within the philosophy of language or the foundations of mathematics), we witness a vivid expression of the range of tasks with which the classical portrayal was expected to engage.

(8) However, more than one hundred years of subsequent effort in mechanics and other fields have demonstrated that such dilemmas are not so easily or permanently resolved as the classicists believed. As noted in the Preface, classical mechanics has never died, but has instead marched robustly forward to our times in the genial custody of engineers and applied mathematicians, for it remains our best linguistic vehicle for auguring the behaviors of everyday macroscopic materials successfully. Through the probing of later investigators, some of us now appreciate that the nineteenth century’s characteristic problems with “force” et al. were not adequately resolved by the classical “cures”—that the problems of those times did not trace simply to conceptual sloppiness or non-rigorous articulation, but flow instead from deeper mathematical issues connected to the basic intractability of many forms of physical description. Any practical term of macroscopic classification, it turns out, is confronted with the formidable task of trimming a vast amount of underlying complexity to humanly manageable standards and such considerations supply the real causes of why peculiar textures naturally spring up within our successful employments of “hardness,” “force” and “causation.” In later chapters I shall articulate several basic models (my facades) that indicate how such underlying strains sometimes induce a complex fragmentation in surface syntactic structure.

In other words, the nineteenth century’s characteristic “methodological” problems turn out, from the perspective of a century later, to reflect the generally cantankerous proclivity of the physical world to force our ongoing employments of language to evolve along curious and sometimes mystifying pathways. Scientific worries that once seemed as if they merely required a dash of heightened rigor now turn out to trace to less remediable aspects of human circumstance. For the problems that plagued the Victorians cannot be adequately cured by simply correcting a bit of sloppy thinking on X or Y’s part, as the optimistic reformers of the era hoped, but instead mandate the acceptance of quite unusual strategies in the prosecution of successful descriptive policy. It is a pity that these revised lessons are not familiar to a greater audience, for it is too often assumed in general intellectual circles that the old classical cures did work, thereby perpetuating a very unhelpful mythology of faulty methodological anecdotes that continue to plague philosophical thinking to this day (in the form, “The Victorians were
once troubled by symptoms X, which were then cured by tonic Y’’). It is then commonly presumed that Nature’s uncooperative tendencies with respect to descriptive acquiescence emerge mainly with the rise of relativity and quantum mechanics, but this is not true; allied difficulties glower sullenly even at the core of what we may mistakenly regard as the most stolid and respectable corners of engineering (we will obtain a better chance of dealing with the quantum oddities if we first do a better job with respect to classical mechanics’ peculiarities). Likewise, the old struggles over rigor within mathematics should not be regarded as merely minor, and now fully remedied, niceties with respect to the appropriate definition for “limit” or “derivative,” but as tracing to valiant classical attempts to control the bizarre conceptual domains into which mathematical thought seems, almost against its will, ever forced to migrate. We moderns, unfortunately, have lost much of our appreciation of the strangeness of these developments, thereby leading to what I regard as a rather sterile era within the philosophy of mathematics.

(9) Back in the brighter days of the Edwardian era, however, the prospects for achieving permanent rigor looked less bleak, for it seemed as if, in classical thinking, the tools had finally been forged to end conceptual wars forever. As secondary spoils of this apparent conquest over confusion, two major themes enter our modern intellectual heritage:

First, the novelties introduced by new forms of scientific terminology can be adequately controlled by setting their presumptions within an articulated web of explicit theory, which can, in some sense, implicitly define the core behaviors of the terms in question. This innocent-looking and cheery supposition forms the germ of many dubious assumptions about “theory” that flower more fully later. I will canvas how much of this has unfolded in Chapter 4.

Secondly, as noted in the Preface, a pleasant niche for philosophy as a distinctive subject matter gets carved out within the ambit of classical thinking, wherein the village philosopher (often dismissed as a dreamy layabout in less appreciative times) is now assigned a trade as briskly delineated in its obligations as “blacksmith.” This new calling is that of custodian of the conceptual domain, a supposed vocational entitlement that now leads many of us to look upon the problems of “concept” and “theory” in an altogether skewed fashion. Better, I think, that the philosopher accept a less clearly marked portfolio, for that better suits the fashion in which life bequeaths its problems to us.

(10) For a considerable period—say, circa 1880 to 1950—, this classical legacy remains largely dominant, at least within Anglo-American and European philosophical and scientific circles. Because so many folks falsely presume that the problems of rigor highlighted under (5) have been successfully tamed by classical methods, it will greatly assist our speculations if we can make the old problems of rigor come alive again, rather than falsely continuing to regard them as happily vanquished.

(11) Despite the many worthy projects have been pursued under its aegis, the full classical synthesis, when fully and baldly assembled as a “philosophy,” incorporates a range of assumptions about human conceptual capacity that look plainly implausible
and even supernatural taken all together, although any exact pinpointing of where the distortions lie proves elusive (which isn’t surprising, because most of the classical picture is simply cobbled together from the intuitive strands of everyday thinking). Accordingly, a wide variety of contemporary philosophers, whether of an analytic or alternative cast, have wished to reject the full classical story in some way or other. Certainly, a seminal event within classicism’s declining fortunes can be dated to the 1952 publication of Wittgenstein’s *Philosophical Investigations,* which is plainly anti-classical in its tenor even as its other objectives remain obscure. However, earlier thinkers like John Dewey or roughly contemporaneous figures such as W. V. O. Quine are clearly troubled by the full classical melange quite independently of any Wittgensteinian influence. Indeed, the present book reflects many of the neo-pragmatic themes that have been emphasized by these authors, although I hope its specific concerns are more tempered by a commonsensical scientific realism than is often the case.

However, the “correctives” to classical thinking offered by its critics are often worse, in their sum effect, than the ills they seek to “cure.” This is particularly true with respect to the so-called *holism* that is often central within these critiques, as I shall outline more fully in 5, xii. Our later investigation of the factors that cause theory facades to form (which represents a distinctly non-holist phenomenon) should help to steer us past these unfortunate anti-classical proclivities.

(12) It often happens that, when some intellectual project that has promised too much finally exits the stage, some fossilized residue of assumptions as to “what most needs to be done” is left behind. I daresay, by way of parallel illustration, that the unhappy heritage of Freudian thought unwittingly shapes our ongoing assessments in this way. To an extent that we are probably unable to appreciate fully, we are still driven to suppose, “Something important needs to be said about those creepy dreams we sometimes have; surely they *must* mean something hidden.” The story of dreams remains an intriguing scientific question, but our conviction of the continuing urgency of the topic is likely a remnant of the preposterous hopes that psychiatry once invested in their interpretation.

I believe that similar intellectual inertia affects many of our modern musings about concepts, even within the realm of relatively straightforward empirical researches within psychology. We are still inclined to pursue will-o’the-wisp goals without adequate motivation simply because such projects once held pride of place within the classical picture. I believe this is especially true of the halcyon ambitions described under (9) with respect to permanent rigor and clearly delineated philosophical mission. As noted in the Preface, I will often depart from prevailing standards of philosophical method in this book simply because I believe those very requirements are grounded within the dubious conceptions of concept under review here.

(13) If so, then what is to be done? Three primary tasks need to be addressed. First, we should revisit the original patterns of everyday descriptive practice and study more carefully the finer grain that can be found there. Here we will learn that its latent complexities often supply evidence of underlying forms of sophisticated descriptive *strategy* whose employment we have probably not recognized. Leaning upon the
wisdom of the engineers, I shall attempt to delineate the basic sinews of several of these strategic gambits in Chapters 6 and 7. The unnoticed emergence of these unexpected descriptive complexities often create crises in linguistic management: how do we control words that have wandered unexpectedly in their strategic underpinnings?

It is in this regard that words like “concept,” “attribute” and “theory” emerge as the central vocabulary we employ when the need to resettle language upon less confusing rails arises. The only problem is that we are naturally inclined, without benefit of any philosophical indoctrination, to picture “concept”’s corrective functions in simple and overly schematic terms, rather as we invariably picture “friction” as a simple physical process when, in fact, an astonishing variety of processes congregate together under this heading. It is from this native semantic naivety that the classical picture of concepts emerges, as natural inclination is eventually converted into explicit philosophical doctrine. So, secondly, we need to recognize that evaluative notions such as “concept” and “theory” do not hew to a fixed function, but instead trace shifting and contextually sensitive diagnostic paths, adapting to the idiosyncratic personalities of the bothersome primary words (“force,” “red”, “hardness”) they seek to appraise. That is, “concept” and “attribute” do not behave in totally regular ways simply because it is their job to monitor materials that do not behave regularly either.

If these conclusions are just, then we have plainly invested excessive philosophical hope in the expectation that the contents of our concepts can be held firmly fixed, if only we remain sufficiently vigilant. We need to frame, I think, a far more mitigated appraisal of our capacities to anticipate our linguistic futures. Once again, I think the hard won lessons of twentieth century applied mathematics can assist in framing a more tempered view of our actual capabilities.

(14) The main consideration that drives the entire argument of the book is the thesis that the often quirky behaviors of ordinary descriptive predicates derive, not merely from controllable human inattention or carelessness, but from a basic unwillingness of the physical universe to sit still while we frame its descriptive picture. Like a photographer dealing with a rambunctious child, we must resort to odd and roundabout strategies if we hope to capture even a glimpse of our flighty universe upon our linguistic film. In this regard wisdom gradually accumulated within applied mathematics can help us understand the difficulties involved, for they’ve evolved some very effective methods for dealing with recalcitrant subjects.

This view of our subject dictates that the bulk of the book will largely be concerned with a range of revealing and somewhat unusual examples, all designed to bring forth the finer grain I have described. From their puzzling behaviors we can gain a deeper appreciation of the substantive practical goals that the original classical picture sets itself, as well as pondering how we should proceed if we no longer believe its story. Generally speaking, I won’t attempt to reproduce the true arcana of the original history, but instead frame simpler cases that can still supply an appropriate sense of the kinds of troubles displayed within the nineteenth century crises. In fact, I have concocted two little fables (in Chapters 2 and 8) that recapitulate a lot of history within a comparatively short compass (to be comparatively short is not to be short, however).
My emphasis upon challenging example sets this work apart from most comparable literature of recent vintage, which more often traffic (if they supply “fer-instances” at all) in specimens like “dog” and “doorknob.” Such choices trace to the tacit assumption that, at some fundamental level, “all concepts act alike.” But this (very classical) presumption will prove much in dispute in these pages.

If I can tell this part of our tale correctly, without spoiling everything by indulging in excessive technicalities, the story of why drab terms behave badly should seem fascinating in its own right, because words will sometimes do the damnest things.

The rest of this book pursues this basic outline in a fairly straightforward, albeit long-winded, way. As I observed in my Preface, different audiences might choose to navigate its expanses in different fashions. On the one hand, there is currently a very widespread conviction in the humanities that analytic philosophers such as myself have neglected our proper topics, which ought to focus upon grander matters than errant vocabulary. Such critics have become inclined, with increasing frequency, to “turn philosophers themselves.” As I conceded earlier, many of academic philosophy’s current obsessions are apt to seem strange or purposeless even to a charitable observer, but this appearance does not mean that such apparently exotic concerns do not connect quite directly with more robust stuff. Indeed, for such readers, I hope our discussion will persuade them that, like it or not, delicate undertakings within a linguistic vein are practically inevitable for us all, and that we shall do a better job within these dominions if we appreciate the necessity of keeping a foot near to the brakes of commonsense before we roar ambitiously onward. In Chapter 2, I outline a cautionary calamity that has overtaken one of my favorite subjects (folklore)—a ruination that, if it is not wholly caused by impulsive philosophizing, has certainly had its axles considerably lubricated thereby. In the course of this book, we shall sometimes fuss about minutiae that may seem unworthy of the attention of analytic philosophy’s less patient critics. But the proper story of how such concepts work is exactly one where little misapprehensions about descriptive practice are apt to enlarge into full scale disasters if they pass unrecognized. I hope, if nothing else, that I have written this book in a way that makes it clear that academic philosophy’s attention to the details of linguistic engineering arises, in its core ambitions, from a well motivated desire to minimize highway fatalities.

On the other hand, this book is primarily intended as a contribution to ongoing analytic philosophy, although, if that ambition were pursued too exclusively, I would surely exclude our first group of readers. Fortunately, I think that, at a slight cost in bulk, both audiences can be adequately accommodated. In the main, most of our discussion will not be concerned with philosophy in its more devotedly codified aspects, even with respect to what I have called the classical picture. The issues with which we shall generally be concerned instead take their origins within the rushing stream of everyday, practical decision making and it is largely along those familiar banks that our discussion will ramble. Accordingly, I hope that readers with a philosophical background will pardon the fact that I sometimes supply brief background details that they may consider superfluous. I feel that, since I must dutifully identify and explain sundry scientific commonplaces for the benefit of philosophers, there is no reason why the same courtesy
cannot be returned and that its essential philosophical context cannot be sketched for
the benefit of readers with other forms of background.

In fact, I think all of us will do well to recall the practical motivations that gave urgency
to the philosophical study of concepts at the turn of the twentieth century, because I
often feel that allied issues have been lost sight of in much recent work. Although it is
usually recognized that Russell and his cohorts became exercised about concepts
because they hoped to resolve substantive conflicts in other fields, it is usually pre-
sumed—quite falsely—that such troubles are long since resolved and the philosopher
can instead concentrate upon a narrow spectrum of concerns (the old Don is dead, but
the family business continues on). But these assumptions are plainly wrong and have
sometimes led the modern work to become anemic in its motivations. The best way to
document my point is simply to set forth a range of evocative examples and ask my
fellow philosophers as we go along, "What do you wish to say about that?" Quite often,
I think, the response will simply be, "Gee; I've not been concerned with cases like that."
And if those replies are forthcoming, they mark how far we have descended from
Russell's level of inquiry, for he ranged over exactly the same territory as I propose to
explore. The answers I suggest will be different than his, but we look at the same
landscape.

(iv)

Science should be used but not mentioned. The first precaution we should adopt in
attempting to minimize conceptual misadventures is to beware of dressing every
concept in common khaki. In this regard, most meditations on our subject too swiftly
"overlook the impertinent individualities" of particular evaluative judgments, to para-
phrase Charles Lamb's complaints about Sir Thomas Browne:

That the author of the Religio Medici, mounted upon the airy stilts of abstraction, con-
versant about notional and conjectural essences; in whose categories of Being the possible
took the upper hand of the actual; would have overlooked the impertinent individualities of
such poor concretions as mankind, is not much to be admired.7

As noted above, many philosophers eagerly herd every passing appraisal of concept or
attribute into immediate commonality, gathered into some great, generic corral dubbed
"the domain of concepts," "the field of logical possibility, "the world of uni-
versals," "Plato's heaven" or some variant enclosure of that ilk. As indicated in our
discussion of Frege’s third realm, I don’t consider the metaphysical connotations of
phrases like these to represent matters of great consequence; I worry rather about the
manner in which the critical features of specific evaluative judgments become dusted
over in this indiscriminate massing of abstracta. In the ensuing bustle, we lose sight of
the impertinent individualities that allow our everyday talk of "concepts" and "attributes"

to serve so many useful functions in the ongoing administration of linguistic use. “I want to figure out how concepts in general work—how they grab onto the world—,” announces the overly ambitious investigator, “for that’s the only aspect of everyday conceptual evaluation that I find truly mysterious.” No; the substantive information we convey when we judge that, e.g., “Archie has not fully grasped the calculus concepts” can differ subtly from occasion to occasion and we are sometimes tempted into dubious crusades simply because we have blurred together the shifting hidden complexities of these judgments. There is less commonality to our sundry weighings of “conceptual grasp” than meets the eye and we make a great mistake if we rush too quickly to framing general hypotheses about “how all concepts behave.” Accordingly, although we must render proper tribute to the many fine services that words like “concept” and “attribute” provide, we should also recognize that these drab and unprepossessing terms occasionally act as the Uriah Heeps of language, ‘umbly pretending to accommodate to our wishes whilst secretly scheming to usurp our affairs. It is probably this attention to the basic tension between the admirable and unfortunate aspects of real life conceptual appraisal that most distinguishes our discussion from that found elsewhere in the philosophical literature.

In this connection, we might observe that schematic approaches to concept and opinions on the nature of philosophy itself tend to support one another in unhappy symbiosis, particularly within the analytic tradition. Many contemporary authors regard the duty of maintaining vigilance over the “conceptual domain” as their especial charge, where the conceptual domain stands to the philosopher as does the ocean to the oceanographer. The former is simply the bloke who watches after what is logically possible rather than the Gulf Stream. Conversely, the presumption that concepts in their inherent purity require such specialized wardens greatly affects our picture of what such qualities must be like. As remarked above, this assumption seems to represent the continuing legacy of classical thinking.

But whatever its origins, I reject this tidy allocation of chores; the subjects discussed in this book seem chiefly distinguished by their messiness. Indeed, the natural world, it seems to me, rarely proves hospitable to disciplinary division. Even the devoted study of, e.g., the life of a sea squirt is apt to carry one eventually into chemistry, physics, mathematics and perhaps a spot of philosophy, for the backyard of every science opens out onto all the others. I agree with T. H. Huxley when he writes:

*Science is nothing but trained and organized common sense, differing from the latter only as a veteran may differ from a raw recruit: and its methods differ from common sense only as far as the guardsman’s cut and thrust differ from the manner in which a savage wields his club.*

But whatever its origins, I reject this tidy allocation of chores; the subjects discussed in this book seem chiefly distinguished by their messiness. Indeed, the natural world, it seems to me, rarely proves hospitable to disciplinary division. Even the devoted study of, e.g., the life of a sea squirt is apt to carry one eventually into chemistry, physics, mathematics and perhaps a spot of philosophy, for the backyard of every science opens out onto all the others. I agree with T. H. Huxley when he writes:

*Science is nothing but trained and organized common sense, differing from the latter only as a veteran may differ from a raw recruit: and its methods differ from common sense only as far as the guardsman’s cut and thrust differ from the manner in which a savage wields his club.*

Because of their different assumptions about our subject, some readers may regard the topics treated in this book as falling outside of philosophy’s proper dominion (although I doubt that they could determine exactly where our investigations should be placed). It

---

seems to me that such expulsion of our endeavors is predicated upon a picture of concepts and conceptual analysis that is under critical challenge here. But even if I am wrong about philosophy’s proper mission, I believe this work articulates useful things with respect to its chosen topics, never mind their exact disciplinary classification.

Before we proceed further, let me introduce a somewhat awkward notation I will employ for convenience in the sequel. Quite commonly our notions of simple concepts like redness are closely associated with linguistic predicates such as the phrase “is red.” Since we do not wish to confuse the linguistic unit “is red” with its purported conceptual underpinnings, I shall designate the concept itself in boldface rather than quotation marks. Thus I may write: being red (or redness or even simply red) is the concept that belongs to “is red.” None of this notational barbarism is intended to convey any sort of substantive philosophical thesis. I shall sometimes distinguish real world attributes from the concepts we frame on their behalf, but I won’t introduce any special notation to this effect.

I might also mention that, as the book wears on, I will largely restrict my attention to predicative expressions such as “is red” or “is harder than,” rather than spending much times with names like “Vess,” descriptive phrases like “that incredible banjoist” or nominalizations such as “fleemingeredness.” This is largely because much standard philosophy of language often shifts the problems of the latter phrases onto the predicates (a paragon of this transfer can be found in Bertrand Russell’s celebrated theory of descriptions) and I want to investigate the linguistic problems of concepts in their purest and least cluttered forms. If I write loosely of the term “red,” I generally have in mind its predicative development as “is red.”

In restricting my attention largely to predicates, I in no way share the old nominalist contention that traits represent naught but particular objects gathered under the umbrella of a common name. Quite clearly, we use “concept” in a broad manner that does not demand any alignment with linguistic items at all and there are plenty of cases where we clearly possess concepts that can be supplied no predicative expression. In stressing predicative use, I am mainly trying to bring forth the skills we manifest when we possess a concept, as opposed to the contents we happen to grasp, for one of our chief tasks is to understand better how skills and contents interrelate. In this way, my emphasis on predicate usage is really intended as emblematic of a more general range of skills. In any case, this book’s ambitions scarcely stretch to the explication of every gainful employment of the term “concept,” but simply hope to probe the underpinnings of a certain range of everyday forms of conceptual evaluation, and to relate this assessment to the characteristic problems of philosophical tradition.

Finally, I often write of the directivities and supports of predicates rather than employing more standard terminology such as “intensional characteristics,” “normative standards” or “denotation.” All of the latter come heavily burdened with classical presumptions I’d rather avoid, even at the price of sounding a bit vague. In short, I am not attempting to introduce an idiosyncratic technical vocabulary of my own in “directivities” and “supports.” Rather I am trying to evade previously entrenched terminology of that ilk.
Ur-philosophical currents. Recent philosophical literature is commonly distinguished by the working presumption that an author ought to blast every competing vessel from the harbor before he sails his own skiff in. That is, I should first survey the very long list of the doctrines currently active on our topics of interest and then methodically dispatch them all. Such an odd methodological requirement would scarcely be tolerated in any other subject; I believe its popularity derives largely from the picture of philosophy as custodian of the conceptual (wherein any serious rival can be expected to sink under its own internal incoherence).

I shall largely decline this combat, partially because it makes for dreary reading. But there are more imperative reasons as well, which stem largely from the fact that our first obligation must be to explain why we are so interested in concepts anyway. We have already noted that other philosophers, even of the most devotedly analytic persuasion, rarely regard such studies as either deeply informative or crucial. Earlier I indicated the wide range of genuine scientific problems that Russell wanted to address, but almost none of the modern accounts harbor such ambitions (insofar as I can tell). Recent investigations often focus upon rather odd matters such as the question of whether a stuff much like water discovered on a distant planet properly qualifies as being water or not. In truth, issues of some importance do lie hidden within such queer questions, but their linkage to matters of practical concern is scarcely evident and the enveloping literature rarely makes much effort to improve the situation (I am firmly of the conviction that philosophical questions should only be pursued with one hand on the sturdy staff of cases that matter).

In this regard, I believe that Russell had exactly the right explanation for why even non-scientists will benefit from studying the potential wiles of concepts: wrongheaded thinking about these unexciting ingredients within our thinking can send any of us off on lunatic crusades. Such misfortunes do not befall only applied mathematicians who unwisely trust series expansions more than they should. That is, exactly the same factors that occasionally send the engines of scientific progress off the rails bedevil us in the pursuit of more ordinary affairs, with the consequence that, instead of having our buildings collapse or our cannon balls dropping on our own troops, we wind up ruining folklore or being unkind to elderly naturalists. Or, in the case of the explicitly philosophical, we gloomily conclude that we are permanently walled off from the external world by some intervening conceptual fog. All of these dreadful things can happen if we treat the impertinent individualities of unprepossessing words too roughly (as we shall see in the next chapter).

Indeed, although a philosophical author may fancy that the rather boring problems of concepts have been successfully delegated to the experts, it is more likely that vital issues within her favored topics tacitly rely upon subterranean assumptions about the possibilities of “clarity of thought” and the like. In this way, the most difficult problems of philosophical tradition often get quietly transported to a realm of concepts as classically conceived (the region serves as our dark side of the moon or Sargasso Sea). We should
cast a more watchful eye upon the complacent attitudes typical of everyday conceptual evaluation, for that is where much of our wrongheaded thinking obtains its characteristic motifs.

Accordingly, to understand the problems of concepts adequately, we need to return to the gravels from which it all springs—to the headwaters of what might be called *ur-philosophy*: those utopian strands woven into our everyday thinking that sometimes induce us to overvalue our conceptual cards somewhat; that incline us to presume that we possess a little bit firmer hedge against future contingency than we really do. Our first order of business is to observe how *ur*-philosophy’s fugitive voices can genuinely lead us astray within the idiosyncratic circuits of everyday or scientific judgment, when our patterns of thinking become diverted one way or another by their siren strains. Within the more developed and example-free presentations of philosophy, all visible surfaces have often become so highly polished that the underlying processes of *ur*-philosophical manufacture are no longer apparent and the grain that sometimes bewilders us becomes entirely hidden. There is not enough friction available to make forward traction possible.

To start our project upon grittier wheels, we must appreciate how easily humble and natural musings about concepts and attributes can insinuate themselves into our practical affairs and lead us onward to unhappy conclusion. Sometimes the process resembles a familiar species of nightmare. We have been cheerfully ambling along a pleasant country lane when we notice that our surroundings have turned grim. Now we seem trapped within some vast cemetery that sprawls endlessly over gray hills. We find nothing but huge mausoleums that honor dynasties of abstracta of which we’ve never heard. “Where did all these *edifices* come from?” we ask and wonder what faulty turn in the road could have led us into this disconcerting City of the Dead. It’s better that we do not linger long amongst the marble but instead retrace our way back to that sunny lane.

In this conviction that the formal philosophical investigation of concepts often advances too swiftly up the garden path, I echo the allied sentiments of the philosopher J. L. Austin who observes of a related group of evaluative words (he is discussing the sense data doctrine that each moment we are confronted with a determinate field of
directly perceived visual information):

My general opinion about this doctrine is that it is a typically scholastic view, attributable, first to an obsession with a few particular words, the uses of which are over-simplified, not really understood or carefully studied or correctly described; and second, to an obsession with a few (and nearly always the same) half-studied “facts.” (I say “scholastic”, but I might as well have said “philosophical”; over-simplification, and constant obsessive repetition of the same small range of jejune “examples” are not only peculiar to this case, but far too common to be dismissed as an occasional weakness of philosophers.) The fact is ... that our ordinary words are much subtler in their uses, and mark many more distinctions, than philosophers have realized; and that the facts of perception, as discovered by psychologists but also as noted by common mortals, are much more diverse and complicated than has been allowed for. It is essential, here as elsewhere, to abandon old habits of Gleichshaltung, the deeply ingrained worship of tidy-looking dichotomies.9

This is a beautiful encapsulation of a sentiment I deeply share, but its wisdom seems insufficiently appreciated today. For Austin and myself, the very grandeur of a sweeping philosophical thesis provides probable indication that we don’t quite know what we are talking about; that the “importance” of our Grand Contention may derive from the simple fact that we have jumbled different concerns together. Presumptions that sound philosophical progress can be achieved through rarified transcendental argumentation or by thoroughly examining tabulations of “all philosophical positions possible on a topic” startle us, for such methods seem highly prone to dusting over the impertinent individualities that most likely reside at the seat of our problems. Quite the contrary, Austin and I recommend that our attention should turn as quickly as possible to the examination of concrete circumstance where our everyday forms of conceptual evaluation will display their stripes in ways that truly matter. Only there are we likely to find the clues to where we have wandered astray in our Great Thoughts. True; the examples we will consider in this book are quite unlike anything found in Austin’s Sense and Sensibilia (for I believe we must zig-zag between technical example and ordinary life to get our job done), but we share an underlying commonality of skepticism and philosophical modesty.

(vi)

**Semantic finality.** However, most adherents of the so-called ordinary language movement (the school to which Austin is usually consigned) presume that we must have acquired the appropriate subtle uses of our ordinary words in the process of becoming competent in English (Austin’s own attitudes seem weaker and more delicate10). Although professional philosophers frequently bungle their intricacies, it is maintained,

---

we nonetheless learn complex, implicit rules from our linguistic tutors that restrict “concept” and “attribute” to finer circuits of proper application. If we would only attend to these rules, it is argued, we should be able to prevent language “from going on holiday”11 in the manner that leads to errant philosophizing.

The thesis that we learn, as part of the process of becoming competent in English, complicated layers of criteria for the application of words like “concept” or “red” has proved notoriously hard to defend. Its continuing source of attraction to certain thinkers lies in the hope that, could these evaluative epicycles be cleanly identified, many of the problematic assertions of mainstream philosophy could be cleanly dispatched. Unfortunately, there is little evidence that well-bred usage shelters such delicate and canny discriminations. Linguists, to be sure, have ably demonstrated that “proper usage” makes very fine syntactic discriminations indeed, but these most often represent the artifacts of linguistic descent rather than homegrown displays of philosophical acumen.

While I have considerable sympathies for many of the objectives that Austin and the ordinary language school set themselves, such projects rest upon an untenable view of language insofar as they demand a foundation in the notion that “our linguistic training tells us how to use notions like ‘concept’ properly.” Certainly, the project in the present book proceeds upon the basis of diametrically opposed presumptions. In particular, the story told here maintains that many of our conceptual misadventures arise precisely because our “linguistic training” has not prepared us adequately for dealing with a vexatious world.

To explain what I have in mind, let us consider a more general claim that still informs many forms of philosophy of language apart from the ordinary language school. This is the tenet that I call semantic finality, viz., the claim that, with respect to a wide range of basic vocabulary, competent speakers acquire a complete conceptual mastery or grasp of their word’s semantic contents by an early age—no later than 10 or 11, say. This core content then acts as an invariant that underwrites many of our characteristic endeavors: “If we don’t share common, fixed ‘contents,’” it is asked, “how can we possibly understand what others are talking about? For that matter, how can we be sure we are addressing even the questions we pose to ourselves?” To be sure, it is conceded that, beyond their initial period of conceptual inoculation, speakers will often tinker with these early basic contents in minor ways—e.g., later we learn that the usage of “dog” can permissibly extend to cover the wider family Canidae and poetically stretched to embrace human feet. Nonetheless, the majority of matters we subsequently learn about dogs—that Jones’ specimen down the street is an ugly brute; that they are largely color blind; that they are available in sizes smaller than squirrels, etc.—do not alter the stored core content of being a dog and can be ignored by the student of semantics proper.

It is commonly argued, furthermore, that such semantic finality by the age of linguistic majority follows as a necessary consequence of the fundamental creativity of language: the undeniable fact that a linguistically competent speaker can understand a

vast range of sentences she has never before encountered. Here is an explication of the latter by the linguist Ray Jackendoff:

The fundamental motivation behind generative syntax is of course the creativity of language—the fact that speakers of a language can understand and create an indefinitely large number of sentences they have never heard before . . . Corresponding to the indefinitely large variety of syntactic structures, then, there must be an indefinitely large variety of concepts that can be invoked in the production and comprehension of sentences. It follows that the repertoire of concepts expressed by sentences cannot be mentally coded as a list, but must be characterized in terms of a finite set of mental primitives and a finite set of principles of mental composition that collectively describe the set of possible concepts expressed by sentence . . . It is widely assumed, and I will take for granted, that the basic units out of which a sentential concept is constructed are the concepts expressed by the words in the sentence, that is, lexical concepts. It is easy to see that lexical concepts too are subject to the argument from creativity.12

Indeed, Dr. Seuss relies upon this same creativity more succinctly when he explains the virtues of the letter “O”:

“O” is very useful; you use it when you say,
“Oscar’s only ostrich oiled an orange owl today.”13

The joke, of course, is that nobody except Dr. Seuss himself (and derivative commentary such as my own) is likely to utilize the proffered “useful” sentence; nonetheless, we feel we understand it completely. The doctrine that the full range of possible sentential thoughts is generated by an initial stock of fully understood core concepts is sometimes called the thesis of strong compositionality.14

As such, the doctrine is very much part of what I have called the classical picture of concepts. To be sure, strong compositionality is no longer quite the overpowering dogma amongst linguists that it was some years ago—it is recognized, for example, that a wide range of linguistic irregularities are acquired by more specialized means later in learning. But, surely, there is much that is right about a basic contention of “finality”; it seems likely that there are fairly specific forms of data that a speaker must internalize in order to parse novel sentences with respect to their grammaticality and rough import.

However, for our purposes in this book, it needs to be recognized that the semantic invariants provided under such “finality” are unlikely to carry the burden that many philosophers expect them to lift. As we continue to work with our words past our hypothetical date of finalized capacity, virtually every term of macroscopic evaluation becomes subject to subsequent shaping pressures for which our training has left us unprepared. In compensation, subtle correctives and barriers creep into our language, often quite unnoticed, with the net effect of turning our classificatory concepts in quite

13 Dr. Seuss, Dr. Seuss’s ABC (New York: Random House, 1963), 34.
different directions than we originally pictured. These processes etch a finer grain into our usage that often serves as the wharfs from which ur-philosophical misadventures later embark.

A good deal of this book will be devoted to cases of a more substantive cast, but let us look at a familiar predicate where the effect is quite palpable. I have in mind “is a rainbow,” a phrase whose revealing eccentricities will be discussed on occasion throughout this book. Here is a word that might be regarded as the ultimate linguistic survivor: like its biological equivalent, the cockroach, we can be confident that “rainbow” will remain active in English on the Day of Armageddon. Yet if ever there was a word conceived in semantic sin, it is this one, for as children we clearly assimilate its usage to that of “arch,” to the extent that we liberally accept any fairy tale in which agents deal with “rainbows” as if they could be climbed, moved or located (from L. Frank Baum’s Tik Tok of Oz):

[A] gorgeous rainbow appeared [and the fairy]... held out her arms. Straightway the rainbow descended until its end was at her very feet, when with a graceful leap she sprang upon it and was at once grasped in the arms of her radiant sisters, the Daughters of the Rainbow.15

To parse a passage like this correctly undoubtedly requires the infusion of a fair number of “arch”-related semantic notions. Indeed, we might employ the Baum passage as a reasonable test of whether a 7-year-old child “knows the meaning of ‘rainbow’” or not.

But, of course, the worldly stuff that actually props up our ongoing “rainbow” usage is nothing like an arch at all, but consists of suitably irradiated raindrops. How do we manage to keep talking profitably as adults of “rainbows” in the real world, given the

15 L. Frank Baum, Tik Tok of Oz (Chicago: Reilly and Lee, 1914), 248. The illustration is by the great John R. Neill.
preposterous misunderstandings in which this term was engendered? In this regard, I recall no pedagogical sagacity on the part of my parents, estimable as they otherwise were; to the contrary, I vividly remember having the veil of “arch” lift suddenly from eyes in the course of perusing The Boy’s Big Book of Science (or some tome of allied title). At approximately this same age, my mid-childhood belief in Santa Claus suffered similar ontic shock from the whisperings of an older brother, but, unlike “Santa,” “rainbow” somehow regained its wobbly legs and managed to earn a very robust, apply-it-to-the-real-world continuation into my adult years. What secret flexibility allows “rainbow” to adapt so successfully? In fact, the predicate manages to soldier onward precisely because we absorb rather complicated adult restrictions with respect to the circumstances in which we can meaningfully speak of rainbow “locations” and “orientations” (we shall study the mechanics of this in 7,viii). To be sure, our original “arch”-focused naïveties linger on in fossil form, in the guise of a peculiar double standard that divides the sorts of statement we tolerate within a fairy tale from those that we accept within real life, adult application. Since these quiet restrictive controls tend to “just grow up” (like Topsy), it is quite easy to overlook their presence.

The chief mischief that an exaggerated faith in semantic finality brings to our understanding of linguistic process is the belief that all these quiet mature adjustments of context and usage don’t matter to conceptual content proper; that, mutatis mutandis, the latter must remain essentially mummified from age 8 to 85. But this presumption of invariant continuation, I claim, is not correct at all and often proves the source of grievous misunderstanding. After all, when we typically wonder about the “proper content” of our concepts within the intrigues of ordinary life (or when we become scientifically confused), we are rarely interested exclusively in the invariants required to recognize grammaticality, but instead worry about matters of a larger scope. Can we trust this concept to behave acceptably when we try to bring into an untested domain of application? Will we will be led astray if we trust old inference patterns in this new arena? Admittedly, it is hard to fit serious issues of “behavior within untested domains of application” to our “rainbow” example, but we can feebly try. Is it ever possible for a real life rainbow to lie on its side, for example? Could we employ such hypothetical occurrence as a signal to alert a confederate to a secret rendezvous? The answer to both questions happens to be “yes,” but little of practical consequence hinges upon the result. However, it is plainly obvious that our “untested domains of application” will matter a good deal to notions like “force” and “hardness” (to pick two terms we shall study extensively), for our buildings fall down and our knife blades dull at inopportune moments if we augur their conceptual contents wrongly. As I shall vividly detail, when we normally ask, “How should our concept of hardness be properly understood?,” we are framing a question that reaches far beyond the range of what any 8-year-old master of the terminology knows. We portray what occurs within everyday conceptual evaluation quite wrongly if we presume it simply represents a matter of checking whether a speaker qualifies as “knowing the word’s meaning.”

In short, I claim that the linguistic behaviors of “hardness,” “force” and “redness” display considerable affinities with “rainbow”’s manifestly weird deportment. It is
merely that their finely grained oddities are less apparent to the untutored eye (but, of course, this contention remains to be proved).

With “rainbow,” we also witness a basic phenomena that will occupy us in more substantive forms throughout the book: no matter how a term may begin its career, the subsequent necessity of accommodating to real world contours can cause it to migrate in unexpected directions. The term’s continuing vitality may require that we absorb peculiar restrictions that arise as natural adoptions of misbegotten original instruction to suit the developing demands of physical circumstance. These complicating but improving coils are likely to lock in place no matter how we are have been initially instructed (our parents may have been fierce devotees of the thesis that rainbows truly are arches, but we will meekly accept the necessary adult curbs all the same). There is no reason to expect our linguistic training (which, after all, is willing to certify us as “competent masters of the concept rainbow” at ages—7 or so—when we still attribute material forms to rainbows) secretly anticipates the later adaptations in any reasonable sense. Without benefit of juvenile or parental foresight, adult “rainbow” usage regularly discards large portions of its originally allocated field of grammatical claims, leaving behind only a complexly gerrymandered residue that neatly illustrates Wittgenstein’s famous remark:

*It is not every sentence-like formulation that we know how to do something with, not every technique has an application in our life; and when we are tempted in philosophy to count some quite useless thing as a proposition, that is often because we have not considered its application sufficiently.*

That such mature retoolings are rather commonly required merely reflects Nature’s obdurate unwillingness to conform to classificatory practices that are ingenuously framed. Children, on the other hand, usually can’t acquire the full complexity required unless they build upon earlier stages more naïvely pictured. The additional strictures they must eventually acquire to satisfy the world’s prickly requirements represent a (fairly) predictable adaptation to adult circumstance, but their contours will not appear foreshadowed in what the children are have actually been taught.

In my estimation, a chief service rendered by words like “concept” and “attribute” is that they provide a vocabulary that allows us to monitor and correct our usage as we slowly advance them towards increasingly demanding standards of adequate performance. To fulfill this function sensibly, our talk of “concept grasp” et al. must display considerable sensitivity to the maturational level of the speakers we attempt to evaluate. Faced with a very young child who is plainly baffled by Baum’s description of the fairy on the rainbow, we might declare, “Huey probably hasn’t really acquired the concept rainbow yet, having not reached the required Piaget level of causal understanding with respect to material objects.” But an adult who fully accommodates this same demand might be reasonably viewed as conceptually incompetent: “Dewey clearly misunderstands our normal concept of rainbow because he absolutely insists that rainbows can’t

represent banks of irradiated raindrops on the grounds that rainbows have to be things that fairies can potentially climb and no one can coherently perform that activity on smallish drops of precipitated water. Clearly Dewey mistakenly builds more into his peculiar conception of *rainbow* than should be there. Here we seem to fault Dewey for stoutly maintaining exactly the same juvenile thesis that we require as a conceptual benchmark in assessing young Huey’s conceptual achievements. But we don’t seem satisfied with an exclusively adult approach either: aged Louie might suffer allied conceptual criticism if, despite his stunning mastery of the optics of atmospheric display, he stares at the Baum passage in puzzled bewilderment, “I don’t get it; how can anything coherently climb up a bank of irradiated rain water?” Louie may be a master of luminary science, we might sadly conclude, but he doesn’t fully grasp the notion of *rainbow* as the rest of us employ it. In such subtle ways, it seems that the standards we demand of conceptual grasp adjust themselves naturally to the shifting contours carved out by “rainbow”’s quirky career.

Since such issues will concern us in the sequel, I might also remark that a concept’s behaviors over long periods of historical time (the strange vicissitudes that *force* has suffered, for example) need to be approached with an allied context-sensitivity.

Accordingly, it simply does not appear to be true that we evaluate the contents of concepts according only to what needs to be learned by the age at which speakers are normally pronounced conceptually competent. In fact, as we witness in Dewey’s case, we naturally utilize “concept” as a term to guide a usage along a more profitable course if it has begun to develop improperly. Dewey is grown up now; he should recognize that a proper usage of “rainbow” does not require that they must possess a frame upon which folks can clamber. So we tell him, “Dewey, you don’t have this concept quite right.”

To be sure, the additional restrictions we must later learn in order to continue to qualify as grasping “rainbow”’s content properly rarely affect its range of accepted grammaticality, in any reasonable sense of that term. As we noted, sentences forbidden in adult usage are usually accepted without cavil in fairy stories. For this reason, perhaps the devoted linguist needn’t evince much interest in the phenomena of post-competence learning that I stress here. We can concede that a discrete andrecognizable stage of “acquiring the basic syntactic and semantic skeleton of English” probably constitutes a seminal event within the formative etiology of a usage. If so, whatever worldly pressures further shape linguistic behavior beyond this point, however interesting they may be, needn’t concern the student devoted solely to limning this hypothetical platform of early competence. But the student of philosophy—or science, music, intellectual history or any of the myriad other topics where ur-philosophical thinking about concepts frequently goes awry—cannot afford the luxury of such a tightly confined focus on linguistic “content.” For when we typically talk about “conceptual contents” in those contexts, we rarely restrict our attention to the concerns of our narrowly focused linguist.

A chief difficulty here is that the classical picture of concepts firmly believes in semantic invariants as well—indeed, the notion is critical to its optimistic assessment of human capabilities. In turn, this conviction traces to the simple ur-philosophical pictures
we commonly frame of our predicates, where we presume that hidden constancies underlie terms that are actually subject to considerable flux and instability. The question of why we prove so vulnerable to these ur-philosophical currents will serve as a recurrent theme in this book. At present, my point is simply that the linguist's competency invariants can rarely serve as the semantic contents of classical thought. After all, the latter are frequently invoked in circumstances where mentioning the linguist's competency invariants would seem like a joke. “What should we regard as the proper core of the concept force?” “Well, my mama taught me that a force is a kind of shove.”

The root reason why we cling strongly to the invariants of the classical picture traces to a fear of unfoundedness: if language isn't tightly moored to constant concepts, then our projects may come unraveled. This is revealed in the nervous questions we are inclined to frame: “If we don't share common, fixed 'contents' with our fellow speakers, how can we possibly understand what others are talking about? Without continuing invariants, how can we even address the questions we pose to ourselves?” I think the only way to address these unsettling concerns is to work through an appropriate range of calming examples. But we don't develop these anxieties because we've read modern linguistics and have decided that our thoughts must be therefore restrained by the invariants it has uncovered; such worries trace to far more primal sources.

In any case, it is easy to fall into the trap of presuming that, whenever we speak of the concepts affiliated with predicates, we always consider the same underlying factors. But the rigors of matching the complexities of real life usage actually force our adult employment of “concept” to follow more complex patterns, although the various hedges and correctives that make this possible may escape our notice. In short, applicational practice and associated picture may come rather dramatically apart in our usage of “concept” (just as it does with “rainbow”), without our paying much attention to the shift.

Prima facie, it is easy to supply cases where our evaluations of what is required for the “complete conceptual mastery” of a trait shift dramatically according to context. We provided several examples involving being a rainbow above; here is another. A mathematics teacher might write in a letter of recommendation:

> Although it was a purely technical “cookbook” course, through her fine work Penelope has demonstrated a complete mastery of the fundamental calculus concepts and is more than adequately prepared to take courses in mathematical analysis.

Yet two hours later she might announce, in a second vignette from college life:

> Class, we must pay careful attention to these dreary δ/ε matters, because even the great Euler didn’t really grasp the proper content of the calculus concepts he manipulated with such astonishing skill.

On a possession of invariants view, the discordance betwixt these two natural expressions of “conceptual evaluation” should trouble us because, by the standards we utilize in framing the second claim, Penelope “possesses” the concepts of the calculus far less ably than Euler. Not only was he more technically deft than Penelope (or anyone else now alive), he even thought correctly about “limits” to a certain extent whereas no
semantic issues of this ilk may have ever crossed Penelope’s mind during her immersion in cookbook rules.

In the sequel, I will often stress that real life conceptual evaluation is heavily contextual and that phrases like “mastery” and “proper content” generally focus upon the skills that are especially salient at the stage of development under consideration. But if we ignore this palpable sensitivity to developmental grade (which I call “seasonlity” later) and remain implacable convinced (because of semantic finality) that all key directives of predicative use lie secretly preformed within early conceptual grasp, then we will engender the somewhat mythical and elusive picture of concepts that stands at the core of the classical picture.

(vii)

Lessons of applied mathematics. Accordingly, despite my sympathies for Austin’s disapproval of philosophical Gleichshaltung, the argument in this book will not proceed under the assumption that it seeks a conceptual analysis of “concept.” Indeed, I think the range of words that “concept” attempts to evaluate are so varied in their impertinent behaviors that “concept” itself cannot be expected to behave in a rule-monitored way across all of its applications. Our evaluative term eventually acquires its subtle discriminations through its assigned duties; whatever initial guidance we acquired from Mom and Dad are probably simplistic in their contours.

But why do predicates sometimes behave so perversely? Here my lines of thought depart even more dramatically from Austinian emphases, for I believe the answer rests largely at the unwelcoming door of Mother Nature. The universe in which we have been deposited seems disinclined to render the practical description of the macroscopic bodies around us especially easy. Quite the opposite; applied mathematics has discovered that even physical systems of a theoretically simple composition are apt to behave in disagreeably complex ways. Insofar as we are capable of achieving descriptive successes within a workable language (that is, devise linguistic gambits that permit valuable inferential conclusions to be drawn or allow for prudent planning), we are frequently forced to rely upon unexpectedly roundabout strategies to achieve these objectives. It is as if the great house of science stands before us, but mathematics can’t find the keys to its front door, so if we are to enter the edifice at all, we must scramble up backyard trellises, crawl through shuttered attic windows and stumble along half-lighted halls and stairwells. Add an extra term to an equation we already understand or tweak its boundary conditions slightly and we may find that we must invent entirely new fields of mathematics, with an expenditure of vast amounts of cleverness and perseverance, to extract any information at all from our slightly altered specimen. This observation—that we must continually devise unexpected stratagems to further our slow linguistic advance upon the world—represents a vital lesson from applied mathematics from which we can all benefit. Many working philosophers, however, greatly underestimate the inferential difficulties that frequently prevent us from reasoning readily from premises
to practical conclusion. Through one swift swipe of unjustified optimism, the practical obstacles that force conceptual evaluation to turn complex in real circumstance become removed from view. If, as is the wont of many professional philosophers, one deals exclusively in schemata ("theory T," "premises P," "conclusion C," etc.), one can pass an entire career without ever experiencing the retarding obstinacies of real practicality.

The history of successful applied mathematics often provides tales of the following sort: scientists begin treating a target subject matter with terminology that they initially conceptualize according to a fairly simple picture, but they find, as its successful applications grow, that puzzling anomalies or breakdowns gradually emerge. The restrictive patterns in which their words seem wisely used do not suit their original picture of its activities at all. A painful—and often protracted—scrutiny of "how their original successes worked" may ensue, to the eventual conclusion that their underpinnings rest upon drastically different foundations than were originally presumed; that an accurate treatment of their subject requires more delicate considerations of strategy and circumstance than were contemplated in the confident days of first beginnings. Indeed, these emergent complexities can prove so intricate that, as with "rainbow," it is virtually unimaginable that humans could have wended their way to such refinements without having first bumbled through an initial stretch of semantic naivety. In the interim, we must sometimes bide our time patiently, while we await semantic illumination.

We should not pretend that, through armchair meditation of a sufficiently diligent sort, we might have forecast from the outset how these wavering directivities will work themselves out. Nor should we imagine that, as we evaluate such terms for "content" in the course of their developments, we can necessarily penetrate to the deepest heart of what makes them tick. Possibly in fifty or a hundred years we will better understand the sources of the pressures that mold our usage as it does, but, most likely, not now. In many ways, this plea for tempered patience represents nothing but a recasting of Quine’s favorite simile (derived from the sociologist Otto Neurath who appropriated it, in turn, from antiquity’s ship of Theseus) of language requiring maintenance like a schooner at sea:

[I]n Neurath’s figure, we cannot remodel [the vessel of language] save as we stay afloat in it . . . The ship may owe its structure partly to blundering predecessors who missed scuttling it only by fools’ luck. But we are not in a position to jettison any part of it, except as we have substitute devices ready at hand that will serve the same essential purposes.17

except that I allow that the day can eventually come when our ship is completed and we recognize how all its finished parts fit together. But the utility of “concept” talk does not apply only to perfected frigates; it provides a tool we must employ in the construction work as well. And this is why our evaluations so often behave contextually; they are helping advance the carpentry at hand.

Accordingly, a fair amount of this book will be devoted to questions of what might be reasonably called *linguistic engineering*: given the problems that a difficult world presents, supply viable strategies for employing language to advantageous effect in their presence. Leaning upon the hard-earned wisdom gathered within applied mathematics, I will suggest some unusual policies for resolving these difficulties, which appear to be realized, at least to first approximation, within the behaviors of certain familiar classificatory predicates. We can also benefit from the council of the engineers with respect to semantic patience: sometimes we lack the means to figure out why our linguistic mechanisms work as they do and we must wait until our understanding of supportive process improves. After all, as the great Edwardian scientist Oliver Heaviside remarked with respect to premature efforts to frame an electrical topic rigorously: “Logic is eternal, so it can wait.”\(^{18}\)

In fact, the lessons of applied mathematics supply several stronger morals for our project: that our optimal forms of physical description are often constructed from ill-suited materials skillfully assembled and that surface syntactic simplicity can be purchased at the cost of complex underpinnings. But we should wait until we can investigate suitable illustrations before we attempt to develop these thoughts further.

I firmly believe that, even when we retreat from the comparative rigors of applied science to the slacker demands of everyday offhand usage, the requirements of strategic complexity do not vanish, for the same physical world confronts Huxley’s veteran guardsman and his raw recruit. To be sure, the sharp figures of required strategy may lie comparatively muted within the carpet of looser usage, from which adjacent patches of irrelevant assertion have been less rigorously pruned (adult “rainbow” talk is loosely segregated from “arch”-based misunderstandings only through rather gimcrack constructions). It will be my constant policy to oscillate betwixt fairly regimented examples of technical usage (to be explained, however, in accessible terms) and the looser dominions of informal physical description. It is my hope that such comparisons can best illuminate the nature of the problematic that “concept” talk generally needs to address. To be sure, the untutored novice is likely to find himself consigned to a broader range of adversarial circumstances than his superior, who can depend upon the conventions of civilized fencing to maintain a more discernible order within his own thrusts and lunges, while the recruit must thrash about in improvised response to less disciplined foes. But, again, I am not attempting full generality of description here; I cannot supply a complete inventory of every pressure that effects every bit of language. It will serve our purposes if I mange to trace out several non-classical patterns whereby language use accommodates the strategic complexities required by real world recalcitrance.

To sum up: although I agree with the ordinary language school that our *ur*-philosophical strayings are often occasioned by misunderstood words, these confusions do not stem from violations of linguistic norms laid down by polite society, but from

---

\(^{18}\) This is from Heaviside but I haven’t be able to retrace my source. The allusion is apparently to St Augustine: “And yet the validity of logical sequences is not a thing devised by man, but it is observed and noted by them that they may be able to learn and teach it; for it exists eternally in the reason of things and has its origin with God.” *On Christian Doctrine*, bk. 2, ch. 32.
the misdiagnosis of external shaping pressures. We can’t fault predicates for merely “going on holiday,” for, in a language that is constantly evolving to suit novel circumstances, one word’s day at the beach may prove to be another’s survey of exploitable resources.

(viii)

Why study concepts? Thus, although the techniques proposed will be somewhat novel, my basic motivations for studying the problems of concepts should seem rather familiar. We must first keep in mind the fact that the classical tools that Russell and his contemporaries articulated were designed to tame the strange and unexpected behaviors of certain scientific terms. The materials they employed to this end were deftly extracted from our everyday presumptions about conceptual evaluation. The problems Russell et al. sought to remedy are quite palpable and, insofar as classical approaches have genuinely assisted in the advance of science, they allow us to witness the good offices that our words of conceptual evaluation commonly render us, even if their underpinnings have been wrongly construed. Nonetheless, when all is said and done, the classical picture of concepts is slightly too Pollyannish at its core: it is uniformly bright and cheery and fancies that, with just a little hard work and good old-fashioned soap and water, we can neatly mop up all of our messes. Looking backward to the motivating problems of Russell’s era today, it now appears that the classical approach didn’t manage to diagnose their underlying problems quite rightly. The characteristic failures of those misreadings suggest, moreover, that our future prospects in science are likely to be confronted with the same kinds of unexpected twists and oddities as bedeviled the nineteenth century. We must learn to live with a somewhat diminished set of expectations in comparison to those championed by the optimists of the classical era. If so, how should we look at concepts, so that our philosophical expectations on this subject can be brought in line with a less rosy appraisal of our conceptual prospects?

Indeed, a good way to understand the project of this book is to view it as simply the engine of Russell’s thinking thrown in reverse (so that it becomes a kind of refrigerator). Following our strong ur-philosophical tendencies to regard our predicates as generally invariantly stable and otherwise amendable to “clear thinking” remedy, Russell proposes that the conceptual difficulties afflicting science should be corrected through similar expedients. One hundred years later, we now recognize that many of the central puzzles of his day cannot be wholly remedied in his optimistic manner, but trace instead to deeper and more subterranean questions of effective strategy. I maintain that the same kinds of hidden strategic factors also affect the common classificatory terminology of everyday life, albeit in less overt forms. I therefore recommend that we transfer applied mathematics’ richer appreciation of the unavoidable divergences between fond hope and supportive reality should be transferred back to the circles of everyday life and let this wisdom curb the strands of ur-philosophy that sometimes prompt us to rash enthusiasms and embellishments.
So the basic philosophical brief we set on our desks is exactly the same as Russell’s: evaluate, as best we can, the prospects we confront for bringing wayward predicates and concepts under adequate management. This requires, for the reasons we have surveyed, that we study what we are about when we evaluate the contents of sundry concepts, for that is the activity of ordinary life from which this entire fabric spins.

As we have noted, linguists or psychologists frequently have quite different goals in view: determine what sorts of data need to be absorbed in order that certain basic linguistic and psychological skills be acquired. As such, these are perfectly laudable purposes and can also be fairly described as “constructing theories of human concepts.” But, in accepting that description, we should not fall into the trap of presuming that such investigations are likely to prove directly pertinent to problems sketched above. That would occur only if an extremely strong version of semantic finality were to hold: that everything we normally consign to “conceptual content” is captured by the conditions of competency we acquire when we master a notion. Prima facie, that assumption should embraced only after very cautious scrutiny.

Such animating concerns keep this book’s investigations in harmony with both philosophical tradition and issues of salient practical consequence. As mentioned before, I am sometimes puzzled about the exact motivations of the contemporary philosophers who pursue the study of concepts nowadays, because their proposals have little evident bearing on the problematic I have sketched. To be sure, sometimes (as in the case of David Lewis) the point of view seems wholly classical in quality and hence can be understood as simply a fine-tuning of Russell (and I’ve incorporated some of Lewis’ views in Chapter 3’s appendix). With respect to W. V. Quine, Michael Dummett, Robert Brandom and other critics of that type, the motivating impulse is to isolate the precise manner in which the classical picture distorts a reasonable view of human capacity. I do not agree with their varying diagnoses but fully share their overriding objectives, for this book represents my own effort to carry a similar project through.

But other writings on concepts often leave me baffled. Sometimes the provocation to their production seems little more than disciplinary tropism: a new “theory of concepts” is proposed simply because “that is the kind of thing philosophers are supposed to do.” There is a variant strain afoot that maintains that a “general theory of concepts” is wanted to satisfy the alleged requirements of folk psychology, cognitive science or both. I believe that serious misapprehension about the likely character of scientific theories is tangled up here, but these are issues best postponed until a suitable moment later in the book (10, iii).

However, I am reluctant to criticize such endeavors very extensively, for I am perplexed by the fact that such works rarely wander near the kinds of troublesome cases that explain, to me at least, what the primary point of worrying about concepts is. But I hate to frame hypotheses as to how authors might address issues they ignore, for I am not fond of putting words in other people’s articles.

This discomfort with the motivational lapses of the contemporary literature explains why a fair number of pages are devoted towards placing the common focus of Russell and myself back on the table (including its original ambitions for scientific
improvement). I have strived to accomplish this as far as possible with simple and homey examples, although I will also register some of the characteristic cases that have proved critical within the development of science. But if the reader finds the little parables wherein I develop this material (contained mainly in Chapters 2 and 8) boring or superfluous, they can be lightly skimmed.

Mitigated skepticism. The exaggerations of classical thinking and its derivatives are scarcely our only concern, for there remain all those nihilistic tendencies that cluster under philosophical banners such as “holism,” “post-structuralism” and “deconstruction.” For better or worse, none of these can be fairly labeled as classical in intent. However, the first of these—holism—was engendered in the mid-nineteenth century as an attempt to counter certain forms of classical rigidity. In its original form (say, as provided in the writings of the German physicists Hermann Helmholtz and Heinrich Hertz), the doctrine was temperate in character and represented only a rather mild departure from classical orthodoxy (4, iii). But in the twentieth century, holism’s more unhappy proclivities were allowed to run to wild and destructive extremes, supplying us (inter alia) with Kuhnianism and post-structuralism. Truly if these doctrines represent our only alternatives to classical thinking, we should surely cleave to the latter, following Hilaire Belloc’s advice:

And always keep a-hold of Nurse
For fear of finding something worse.19

Certainly, I want my own measure of anti-classicism to be considerably more restrained than any of this. In fact, our concepts don’t fail to be classical because, as holism would have it, their busy fingers weave through every doctrine we accept, but because the increasing demands of real world pressure often shift the polar compasses that guide our words silently in subtle and unrecognized ways. It is an unfortunate aspect of our culture that we are encouraged to suppose that conceptual readjustments always enter language in some sudden triumphant burst of brilliance—this prompts the exaggerated worship of “genius” to be surveyed in Chapter 8. Episodes of this ilk occur, of course, but quite often significant changes gradually sneak into a usage in small and unnoticed ways. Sometimes no assignable human agent can be credited for these little turns of screw, for it is mainly the hidden hand of Nature’s obduracy that forces the directionality. Adaptively stumbling through a series of imperfect adjustments represents as significant an aspect of the natural history of words as it does with respect to the descent of biological species. Full recognition of the required subtleties of a terminology often dawns upon us slowly and it seems beyond the reach of human capacity to speed up this lengthy process of arrival significantly. Analogously to “rainbow,” certain

19 Hilaire Belloc, “Jim, Who Ran Away from his Nurse, and was Eaten by a Lion” in Cautionary Verses (New York: Alfred A. Knopf, 1976), 12.
developed strategies seem so inherently complex that it becomes hard to conceive how they could have been linguistically first delivered without the midwifery of misunderstanding and false optimism. For such reasons—and these considerations will be abundantly illustrated in our case histories—, sometimes it is wise to not inquire too deeply into the strategic workings of a successful span of usage; sometimes our linguistic motto should temporarily be, “If it ain’t broke, don’t attempt to determine exactly how it really works.”

Nonetheless, such intervals of profitable neglect last only so long; eventually our semantic pigeons return to roost and we become forced to trace more accurately the true rationale whereby our usage has heretofore supplied us with proximately valuable results. And we report what we’ve learned in the language of “concept” and “attribute,” for that is one of the chores they facilitate.

In sum, our limited capacities for far-reaching conceptual insight create a linguistic predicament that nicely illustrates what David Hume aptly describes as

> the whimsical condition of mankind, who must act and reason and believe, though they are not able, by their most diligent inquiry, to satisfy themselves concerning the foundation of these operations or to remove the objections which may be raised against them.20

Hume, to be sure, gloomily presumed that the semantic underpinnings of most words remain permanently sealed off from our view, whereas I maintain that we are perfectly capable of discerning their proper foundations clearly. The rub is simply that doing so can consume a lot of time and research and cannot be readily acquired through armchair musings. In the meantime, as Hume correctly notes, we must continue to “act and reason and believe.” In consequence, many of the most interesting questions in philosophy of language and the methodology of science concern the issues of how we should proceed in the periods while we patiently await fuller enlightenment. But permanent pessimism aside, otherwise Hume is right: our conceptual plight is rather whimsical, given the pretensions to complete understanding we commonly entertain:

> The greater part of mankind are naturally apt to be affirmative and dogmatical in their opinions, and while they see objects only on one side and have no idea of the counterpoising argument, they throw themselves precipitately into principles to which they are inclined, nor have any indulgence for those who entertain opposite sentiments. To hesitate or balance perplexes their understanding, checks their passion and suspends their action. They are, therefore, impatient till they escape from a state which to them is uneasy, and they think they can never remove themselves far enough from it by the violence of their assertions and obstinacy of their belief.21

Our “affirmative and dogmatical” natures (from which none of us wholly escape) play a substantive role in complicating our understanding of conceptual evaluation—the optimism at the heart of the classical picture stems from these inclinations. As Hume’s remarks indicate, we share an innate inclination to overestimate slightly whatever

21 Ibid.
security we’ve managed to achieve within a favored field of endeavor. A safety engineer trusts that her parameters of building tolerance are somewhat more reliable than they really are. A mathematician is convinced that his own proofs will stand forever as logically unassailable, even as he is aware that the prevailing currents of mathematical focus often swirl elsewhere in unpredictable directions. We feel instinctively convinced that we know what it’s like for a stone to be red on the surface of Pluto, although none of us have ever visited such an inhospitable clime. Perhaps most emblematic of this basic human foible, the mere act of entering a gambling casino seems capable of reducing the most rational among us to quivering, primitive superstition, improvising implausible incantations and highlighting spurious patterns in vain attempts to convince ourselves that we can hedge, through suitable linguistic gambits, against outcomes that lie inherently beyond our control. The headwaters of classical optimism trace, I believe, to this same ur-philosophical spring.

As Hume observes—and the lessons of applied mathematics collaborate—, we are frequently forced to “act and reason and believe” in linguistic circumstances that lie far in advance of any satisfactory assessment of the “foundations of these operations.” Given our genetic inclination to claim unmerited certainty, it is not surprising that we habitually exaggerate the strengths of the assurances we possess when we fancy we have grasped a concept adequately. Often we presume that we have gauged the long range directivities of our terms to standards higher than we should presently aspire. In truth, what we concretely know about the working bases of commonplace descriptive vocabulary is apt to prove somewhat thinner and to provide somewhat weaker guarantees with respect to future linguistic activity than we choose to believe. Nevertheless, we doggedly struggle to maintain the shifting slate of semantical considerations that might arise over the long history of a tricky word into a single and tidy folder, for that hypothesis of semantic predetermination better supports our illusions of perfect conceptual foresight. Rather than accepting our altering evaluations as simply the natural expression of new interests that emerge as a word ages, we fancy that its unfolding morphology must have lain preestablished, its schedule of adult organs already intact, within some originating conceptual seed. All of this latent content, it is claimed, we manage to grasp completely early in our careers and the erratic later fortunes of derivative, force and hardness indicate nothing beyond the pitiable fact that we sometime botch the processes of maturation. Or, when a term’s patterns of unfolding prove too irregular to suit this convenient myth of preformation, we decide that its users have somehow switched, without noting the slippage, the concepts originally consigned to the predicates “derivative,” “force” and “hardness” (semantic accidents that presumably occur during “moments of mental abstraction” like the one that caused the governess in The Importance of Being Earnest to mistake her infant charge for a three-volume sentimental novel). Indeed, imputations of unnoticed polysemy represent a common hallmark of classical thinking, as we shall frequently observe in the sequel. These temptations to fictive hypothesis are understandable, for if we seek to maintain the assurance that we possess the fortitude of semantic character to restrain our own usage to the conceptual straight and narrow, the lamentable straying behaviors we
invariably witness in the usages of our peers can only be explained by the fact that they, due to undisciplined inattention, have permitted their words an excess of conceptual leash, leading to the shifting evaluations of “conceptual content” we have described. Whereas only experiment can decide whether a theory is true or not, we would very much like to believe that unadorned clear thinking can, if we are simply careful enough, inventory the contents of our various concepts completely. ’Tis odd, we wonder, that so few of our predecessors have been able to uphold this same semantic standard successfully.

Insofar as I can determine, such are the root causes of our instinctive attachment to classical “conceptual invariants.” As much as anything, the long argument of this book is designed to encourage my readers to look at natural linguistic processes in terms other than these; to tell a tale of thought and language that does not recount a dirge of stalwart contents continually grasped and continually betrayed. In fact, as we’ll discuss later (5,i), there is a substantial tradition of philosophical endeavor (which I will call pre-pragmatism) that agrees with me in these mildly deflationary ambitions. Unfortunately, most of its adherents become so carried away by anti-classical fervor that they embrace alternative visions that are “ever so much worser” in their consequences than the classical story itself (the post-structuralism of which I earlier complained is a case in point). The trick, therefore, is to weaken the classical picture of content sufficiently to bring our conceptual expectations into alignment with what it is humanly feasible, without utterly shutting the door on our capacities to improve our usage in rigor and clarity.

To gain a preliminary impression of the typical manner in which we mildly exaggerate our conceptual hold over descriptive words, consider this science fiction narrative (adapted from an old paper of mine 22). As a kid, I once saw a movie entitled Untamed Women in which a tribe of Druids were depicted as having emigrated long ago to an

isolated South Sea island also populated, as luck would have it, by dinosaurs and ill-natured cavemen. Through their centuries of Polynesian isolation, this Druid band continued to speak a charming, although stilted, form of antique English and when the Yankee aviator heroes of our movie landed their fuelless B-29 immediately before them, all assembled Druids cried out, in a spontaneous display of collective classification, “Lo, a great silver bird falleth from the sky.” To these Druids, having never heard words like “airplane” and having little contemplated the possibilities of machine flight heretofore, “bird” seemed exactly the right word to capture the novel object that had just settled before them. Most real life linguistic communities are rather conservative in how readily they accept new terminology, so it is not surprising that the Druids persisted in employing “bird” in the same airplane-tolerant way throughout the course of the film. And we may imagine (here I depart from the movie’s scenario, which strayed in more lurid directions) that this linguistic practice perseveres even as the Druids eventually master all of modern biology and allied fields. “Yes, I recognize”, an up-to-date Druid declares, “that we do not want to place great silver birds (which are mainly metallic in composition) into the same biological class as other animals such as chickens. Nonetheless, my forebears have always employed ‘bird’ with a more general meaning than do the Yankees and I respect their ancestral practices. For biological purposes, the technical term ’aves’ will do nicely. But why should we follow the Yankees otherwise in their strange classifications? After all, they are also inclined to dub flightless cassowaries as ‘birds,’ a classification that Druids have always rejected as deviant (although we allow, of course, that these creatures belong to aves).”

Yet, suppose that the first Druid sighting of an airplane does not transpire in observing a vehicle aloft but instead happens when an exploration party stumbles across its downed wreckage in the jungle, its unkempt crew lounging around its hulk with their laundry draped from the ailerons. “Lo!”, our alternative Druid band spontaneously decrees, “a great silver house lieth in the jungle.” The vehicle’s arboreal mise en scène now suggests “house” to these folks every bit as vividly as the airborne arrival had erstwhile prompted “bird”. This form of usage might easily persist, leading modern Druid descendants to declare, “Of course, silver houses aren’t birds—did you ever see windows in a bird? However, our ancestors were right to characterize these flying devices as ‘houses’ because they can be lived in. Our people have never intended ‘house’ to be employed only in the narrow, ‘silver house’-rejecting mode favored by the Yankees.”

We know enough, I believe, about human classificatory behavior to plausibly suggest why these alternative scenarios might arise. Specifically, in classifying novel objects we frequently search through a limited span of potential vocabulary, looking for the best possible match. “What is this thing?” some cranial search engine asks in the manner of the elderly critic in the Ernest Pintoff cartoon. This routine then consults some ledger prompted by the accoutrements of the setting. An object that maneuvers in the sky evokes a different catalog (bird? star? UFO?) than one that sits sedately in the jungle (house? rock? tapir?) But once an identifying tag has been set, it will be held fixed in memory, even when the erstwhile airborne now rests on the ground. In this sense, the
Druids were half-prepared to classify aircraft, but they falsely suppose that their selection of labels was fully anticipated.

The chief point of this fable is that neither set of alternative Druids has any psychological reason to suspect that they have not followed the preestablished conceptual contents of their words “bird” and “house,” although the chief factor that explains their discordant classifications actually lies with the history of how they happen to approach the airplane. Both groups instinctively presume that their societally established notion of *bird* has already determined within itself whether a bomber properly counts as a “bird” or not. To bolster their case, they might cite the collective unanimity of their fellow classifiers or report the degree to which everyone considered the classification psychologically routine at the time (although, admittedly, they had never seen a bird/house quite that big). In short, the Druids—in the company of the rest of us, I maintain—are inclined to presume that the *guidance* behind the classification as a “bird” or “house” lies entirely contained within their preestablished concepts of *bird* or *house*; they fail to recognize that a substantial part of the directivity actually stems from their historical point of entry into an enlarged classificatory domain. Here the Druidic tendency to assign excessive credit to the realm of “what we have been conceptually prepared to do” seems completely harmless, but it nicely illustrates a basic ur-philosophical mechanism that allows us to misjudge the strength of our current conceptual grasp. In the next chapter, however, we shall examine cases where allied misallocations of “preparation” encourage genuinely unfortunate forms of conduct.

As I indicated above, I am scarcely alone in claiming that the “classical picture” exaggerates, sometimes alarmingly, the “thickness” of the assurances we gather when we become competent in a word. Many of my pre-pragmatic fellow travelers have been likewise troubled by what they regard as the occult or magical characteristics embodied within concepts as classically pictured, feeling, as I do, that its doctrines disguise an uncanny overestimation of real human capacity (3,ii). Although the general tenor of such remarks is right, I don’t believe that terms like “occult” or “magical” provide a sufficiently sharp diagnosis of where classical thinking goes astray. As I’ve emphasized, the traditional picture represents little more than the natural amplification of tendencies implicit in our everyday policies of conceptual evaluation and it is most important that we respect the fact that most of what transpires there proves on the mark and helpful.

So I think, rather than complaining vaguely of myth or magic, our little parable of the Druids supplies a better initial sense of the exaggeration that neo-pragmatists decry in classical portraits of conceptual attainment: “It is beyond human capacity to fully prepare ourselves to classify any damn thing that might come along, but we can easily fool ourselves into believing that we possess such secret capabilities.” In our story, a small degree of uncanny ability is engendered as post-airplane Druids instinctively lump together semantic considerations that emerge as salient at different stages along “bird”’s career, encouraging a false picture of preformed anticipation. This common but ill-founded form of semantic blurring creates, from individually acceptable but temporally distinct, ingredients, a joinery of elements that only encourages our presumed status as
masters of future contingency. The mildly “supernatural” aspects of classical concepts thus emerge when many factors, plausible and important when regarded singly, are amalgamated into unsorted unity, rather as the impossible capacities of a mythological hero might be assembled from the real virtues of scattered individuals.

As creatures of an “affirmative and dogmatical” disposition, I am often reminded of an episode from my youth. I used to stalk my neighborhood as a hooded vigilante of justice, whose trademark weapon was a foam rubber boomerang. The latter proving aerodynamically unstable, I would often strike the family automobile when I sought to dispatch a tree. But rather than entertain the unthinkable thought that the Masked Avenger’s aim was other than true, I would immediately rewrite the scenario into one of surprise attack: “Ah ha, you villain,” I would sneer at Dad’s car, “Thought you could sneak up on me.” In such a vein, perhaps, we cultivate the illusion that we maintain complete mastery over our unfolding words.

But we must acknowledge that our Druidic tale, however appealing, is make believe and that we can profitably trust our intuitions about such fictional cases only to a limited degree. Indeed, one of the worst methodological sins of analytical philosophy—and the trust that perpetuates its inherited prejudices the longest—lies in its strong inclination to treat “intuitive” but fictitious narratives as if they represented hard evidence for its hypotheses, when, in fact, the tales do little more than embody the ur-philosophical leanings they are meant to sustain (it is as if, like naïve Dewey above, we tried to argue that rainbows can’t possibly represent illuminated banks of raindrops because in Tik Tok of Oz Polychrome the fairy manages to climb upon one). An exaggerated faith in thought experiments usually represents another facet of the persuasive influence of classical thinking.

However, we can scarcely expect to run controlled experiments featuring South Sea archipelagos colonized by Druids differently visited. Fortunately for our argumentative purposes, much real life language development displays the factors at work in our Druid story within a more sophisticated guise. The key ingredient in our fictional tale lies in its attention to the enlargement of linguistic application: specifically, to the latitude displayed when a usage previously confined to a limited application silently expands into some wider domain. In the manner of the mathematician, we can profitably picture these circumstances as representing a circumstance where we prolong our usage from one neighborhood of local application into another. In the Druid case, two competing continuations are available whereby the old usage might plausibly enlarge to take proper account of aircraft.

For several important strategic reasons that we will detail later, an evolving natural language frequently displays a strong tendency to form into parochial pockets within which old vocabulary often assumes new, localized readings. Such semantic balkanization creates no problems as long as the transfer of information between pockets is carefully controlled. The general effect of this fragmentation may supply the overall employment of a descriptive term with a polycrystalline appearance (like a granite), its individual grains of distinctive application oriented at sundry angles to one another with
sundry interfacial gunk lying in between. Matrix structures of this type often emerge when new patterns of usage nucleate at local sites along the boundary of some older application and subsequently enlarge to become developed crystals in their own right. Or, as an alternative to this epitaxial metaphor, we might offer Wittgenstein’s:

> Our language can be seen as an ancient city: a maze of little streets and squares, of old and new houses, and of houses with additions from various periods; and this surrounded by a multitude of new boroughs with straight regular streets and uniform houses.\(^{23}\)

If this is so, the general impression of conceptual underdetermination we extracted from our Druid example can be regained through studying the nucleation processes that construct these new pockets of usage, for they display a loose liberty similar to that in the story of our islanders.

Such polycrystalline cases will also exemplify, in a robust way, the shaping hands of linguistic strategy—the lessons of applied mathematics to which I have already appealed, but have only lamely explained. The Druid case is too simple to illustrate much of this, but we shall begin to explore what I have in mind with the central examples of Chapter 3 and 4.

---

\(x\)

**Exaggerated worries.** Despite its regrettable fictive aspects, at least the Druid case conveys some of the grit of ordinary life, rather than representing an argument that exclusively strides forward upon “airy stilts of abstraction.” If we inspect linguistic behaviors from too lofty a point of view, we are unlikely to notice the delicacies of strategic adaptation I highlight here. It lies in the nature of the processes I describe that evolving concepts rarely display gross symptom when seismic shifts transpire beneath their surface equanimity; in a very real sense, our words are too dumb to shout alarm when they cross into essentially virgin territory (we tacitly learn to hedge and control our adult usage of “rainbow” in astonishing ways, but few of us notice these patterns as they gradually settle in). Sometimes it is easiest to appreciate the complexity of the motifs involved by looking first at explicitly scientific cases, where rather sharp demands for descriptive success have forced practitioners to pay attention to subtle detail. And, most importantly, we must never disdain the “mere example,” for it is exclusively through its impertinent individualities that Nature teaches us that it will not submit to facile descriptive ploys.

Perhaps the reader will better appreciate the flavor of the investigative methodology I propose to follow, if it is contrasted with a similarly intentioned approach to our problems that I regard as less helpful. Specifically, in his celebrated commentary on Wittgenstein,\(^{24}\) Saul Kripke articulates what he calls a “skeptical paradox” as to whether

---


we truly grasp a rule such as add 2 in a fully determinant way: “How can we possibly establish,” Kripke asks on Wittgenstein’s behalf, “that we haven’t instead grasped something that will instruct us to starting adding four after we exceed 2,403,756? Assuming, for sake of example, that we have never performed such a sum previously, to what factors should we appeal to indicate that our ‘grasp’ is certain to work in the right way with respect to these large numbers?” Or, in the terminology I have sometimes adopted here, “What non-circular reasons establish that the proper directivities of add 2 instruct us to carry 2,403,756 forward to 2,403,758 rather than to 2,403,760?” Kripke comes up empty-handed in this regard, a result that is clearly unsatisfactory. He further suggests that we might easily worry about our grasp of a concept like redness in an allied way, viz. whether our present understanding genuinely fixes the fact that the next McIntosh apple we classify should qualify as red. It would appear that this skeptical exercise is designed to bring forth some regrettable occultness inherent in the classical picture of concepts, although neither Kripke nor Wittgenstein is very direct on this score.

Although this gambit probably shares the same basic purposes as our Druid example, the exact lessons we should extract from this self-styled skeptical paradox remain inscrutable (at least to me), for exaggerated doubts rarely provide a lucid road map to real-life worries. Indeed, the hyperbolic quality of the skepticism expressed seems to demand that it be stamped out by some sort of sweeping philosophical decree that forever bans such worries from our consideration—a sure recipe, I think, for generating great gobs of Gleichshaltung. For example, certain recent philosophers (e.g., Christopher Peacocke) have decided that the “paradox” can be resolved only if we demand that being the result of adding 2 to x possess acceptance conditions able to guarantee, if a speaker merely satisfies these, that she truly grasps the concept in question (related reflections motivate the sundry “criteria” favored by the ordinary language school). But plausible articulations of these alleged acceptance conditions in concrete cases do not lie ready to hand (nor are they often provided by their philosophical advocates). Insofar as I can determine, the writers in question have become convinced of the merits of their unlikely demands only because they earnestly hope to squash, once and for all, the skeptical threat raised by Kripke/Wittgenstein.

But this can’t be the right way to treat the “paradox,” if only because little effort has been made to distinguish straightforward circumstances like those of “add 2” from those that obtain in the Druid example, where the underlying directivities seem genuinely unfixed. We shouldn’t—I would think—want a “solution” to the Kripke/Wittgenstein query that determines that Druid “bird” must qualify as fully fixed relative to airplanes as “red” does to fire trucks. Nor, for that matter, should we assimilate the command “add 2” too swiftly to “compute e^{2\pi i},” because the surprising story of how the proper directivities of “e^{2\pi i}” were uncovered involves complications of a patently different nature than obtain with the simple arithmetical order (“add 2” represents the application of an easy algorithm, whereas the extension of exponentiation to complex values involved a very delicate continuation of local neighborhoods of the type we shall investigate in 6, vi). Indeed, the tale of how we learned to compute e^{2\pi i} is
strange enough to have occasioned the after dinner remark of Charles Peirce’s father, Benjamin:

*Gentlemen, \(e^{2\pi i} + 1 = 0\) is surely true, it is absolutely paradoxical; we cannot understand it and we don’t know what it means, but we have proved it and therefore we know it must be the truth.*

Indeed, although we will not study its particular case in detail here, the convoluted history of \(e^{2\pi i} + 1 = 0\) nicely exemplifies the sorts of exploratory linguistic discovery that will greatly concern us in this book, whereas I do not think we learn much about concrete linguistic process by subjecting stalwart \(2,403,756 + 2 = 2,403,758\) to artificially exaggerated doubt.

David Hume, we might remember, also contends that sweeping skeptical paradoxes can indirectly aid our attempts to frame a “durable and useful” approach to the exigencies of practical life. To be sure, Hume’s extreme Pyrrhonian skeptic—someone who contends that past regularities provide no guidance whatsoever with respect to future occurrence—cannot sensibly obey his own canons:

*Nature is always too strong for principle. And though a Pyrrhonian may throw himself or others into a momentary amazement and confusion by his profound reasonings, the first and most trivial event in life will put to flight all his doubts and scruples, and leave him the same, in every point of action and speculation, with the philosophers of every other sect or with those who never concerned themselves in any philosophical researches.*

However, Hume claims, a more prudent soul may be inspired to frame a more reasonable mitigated skepticism on such a basis:

*There is, indeed, a more mitigated skepticism or academical philosophy which may be both durable and useful, and which may, in part, be the result of this Pyrrhonism or excessive skepticism when its undistinguished doubts are, in some measure, corrected by common sense and reflection.*

In particular, the “affirmative and dogmatic” among us can benefit from a study of Pyrrhonian meditation because:

[C]ould such dogmatical reasoners become sensible of the strange infirmities of human understanding, even in its most perfect state and when most accurate and cautious in its determinations—such a reflection would naturally inspire them with more modesty and reserve, and diminish their fond opinion of themselves and their prejudice against antagonists.

This recommendation of “modesty and reserve” represents, in my judgment, Hume’s most appealing aspect (whereas, in other arenas, he seems as prone to ill-justified certitude as the rest of us). Indeed, this milder Hume (along with the English engineer

---

27 Ibid., 169.
Oliver Heaviside) might be fairly cited as a patron muse of our own investigations, which bring a tempered mistrust to bear upon the “strange infirmities of human understanding.” But we shouldn’t claim that we adequately understand language’s problematic processes if we can’t localize, to a far sharper degree than the Kripke/Wittgenstein puzzle achieves, the sites where wary vigil needs to be exercised in the course of our real life evaluative activities. By the same token, we must robustly acknowledge the much larger set of occasions where we should not tarry in doubts, for we must never become so timidly prudent that we reject the favorable inferential opportunities, however infirmly founded, that Nature decides to cast our way. “Shall I refuse my dinner because I do not understand the processes of digestion?,”28 Heaviside once asked rhetorically with respect to a bizarre but very successful technique he had uncovered for extracting information from differential equations (we’ll survey this very interesting history in 8, viii). And he was completely right; a wise mitigated skeptic must sometimes plow ahead in lieu of adequate justification.

Despite the “momentary amazements” they afford, meditations upon sweeping forms of Pyrrhonian paradox seem too unfocussed to provide concrete counsel with respect to the questions about concepts I see as crucial. Indeed, the largely lamentable career of skeptical paradoxes in philosophy has usually produced a quite opposite effect. Through their disregard for instructive example, the threats posed by the inflated puzzles often do little more than frighten their audiences into embracing noxious “remedies” that they would have never imbibed otherwise. The handiwork of such scares can be seen, I think, in the implausible “solutions” advanced in the extensive literature that has sprung up in reaction to the Kripke/Wittgenstein paradox.

My own mitigated skepticism claims that, in patches, real life episodes of conceptual grasp are weaker and thinner in their inherent nature than the classical picture leads us to believe. Elsewhere in language I believe the classical story proves fairly accurate to first approximation. As such, these attitudes reflect a less drastic conceptual skepticism than those advanced by my comrades in prepragmatism such as Dewey and Quine. But setting the boundaries of reasonable caution is not easy. After all, Hume’s own recommendations for the proper scope of a mitigated skepticism would have crippled the progress of science if accepted (any study of quantum theory would have been discouraged, for example):

A correct judgement observes a contrary method and, avoiding all distant and high inquiries, confines itself to common life and to such subjects as fall under daily practice and experience, leaving the more sublime topics to the embellishment of poets or orators or to the arts of priests and politicians.29

Indeed, when matters of methodology turn tricky and we can no longer trust the soothing reassurances promised in the classical picture of concepts, our most reliable tutor is often that of historical example. How have complex puzzles with respect to conceptual directivity sorted themselves out in the past? When should we be sloppy

28 Heaviside, Electromagnetic, ii. 9. 29 Hume, Enquiry, 170.
in our justifications and when should we worry about rigor? What mixture of intuitive hunch and regimented procedure should be brought to bear on a problem? We need to canvas the attitudes with respect to these questions that have earned their exponents the historical imprimatur of success. From this abundant well of example—the laboratory of real life—, we will surely extract a better appreciation of the vicissitudes of conceptual evaluation than we might ever derive from an unfocussed skeptical paradox.

Unfortunately, examples being what they are, no study of cases can offer the unswerving methodological recommendations with respect to conceptual employment that philosophizing often promises, including the optimistic classical picture. Indeed, it would be very pleasant if Nature allowed us to be more “affirmative and dogmatical” in our conceptual diagnoses. But this is what mitigated skepticism comes to: sometimes only the passage of time and punishing experience can show us the proper escape from a conceptual dilemma. In the final analysis, the most reliable advisors we have available to us are not, after a point, all that reliable.

To capture our “whimsical condition” with respect to classification and reasoning in another way, we might recall those recurrent nautical metaphors of which the nineteenth century was especially fond, e.g. Charles Peirce:

*But let a man venture into an unfamiliar field, or where his results are not continually checked by experience, and all history shows that the most [stalwart] intellect will oftentimes lose his orientation and waste his efforts in directions that will bring him no nearer his goal, or even carry him entirely astray. He is like a ship in the open sea, with no one on board who understands the rules of navigation.*

The basic analogy can be rendered more poignant if we remember the unfortunate sailors who had previously explored the southern oceans without the benefit of tables or a sea-going clock. Lacking the means to determine true longitude:

*Too many were the ships that dashed aimlessly and fruitlessly about, too far this way, too near that, until scurvy and thirst killed off or incapacitated so many hands that the crew could no longer man the riggings and direct the vessel; and then the ship would float helpless with its population of skeletons and ghosts; another “flying Dutchman,” to ground one day on reef or sand or ice and provide the stuff of legend.*

All the same, such pioneering expeditions were wholly necessary; certain tasks can’t be avoided simply because we haven’t yet found the tools to execute them safely or efficiently. *Blundering forward* is often the mother of invention, even along the less dramatic itineraries of advancing physical description.

Accordingly, this book’s basic tale is one of the “strange latitudes” in which language sometimes finds itself stalled and the means whereby its words eventually wend their ways to port.

---

Our prospects. As such, our discussion may sometimes read like an improbable cross betwixt some old-fashioned meditation on Man’s condition (in the mode of Hume or William Hazlitt, say) and Ingenious Mechanisms for Inventors, since much of our argument for a wary approach to language’s complexity rests upon the subtle engineering that successful descriptive strategies mandate. Although this work is intended as a contribution to the longstanding problems of philosophy, I hope the reader may also extract some simple amusement from the curios of linguistic behavior I collect here. Any substantive book on the etymologies of language is full of the bizarre and unexpected paths that evolving words sometimes follow—how “nice” managed to mutate from a term indicating *stupidity* to one marking *pleasant aspect* 32, for example. My own cases will focus upon somewhat different arenas of adaptation than treated in such studies, but the basic factors that drive language’s continuing adjustments are probably rather similar at core. To the degree we can successfully remove the blinders of Gleichshaltung from our eyes, the better we will appreciate the clever and unexpected ways language discovers to mold itself to a difficult world. They’re not all alike; all predicates do not all work in the same way! We want to reach an outlook where we can look at a usage and exclaim, “My goodness; who could have dreamed that descriptive success could be achieved in *that* fashion.”

My modus operandi throughout is to focus upon important acts of *conceptual evaluation*—what *information* are we attempting to convey when we claim that Archie, Betty or Veronica relate to the calculus concepts in divers ways? In some cases, it is eventually possible to capture quite crisply exactly what is at issue, although often an explicit rendering may not be forthcoming at the moment in question (in the meantime, as we await greater clarity, our evaluations perforce assume the character of schematic guesses with respect to the supportive substratum of a usage). We really have no choice; the conceptual contents we emphasize, even with respect to the same target predicate, frequently need to differ from occasion to occasion, driven by the press of salient circumstance. This is the source of the seasonality I mentioned earlier. The classical picture attempts to tame this rowdy divergence into semantic rectitude by claiming that it merely represents different expressions of some wholly grasped but partially submerged unity, but this is a viewpoint I suggest that we resist.

Given these premises, it will come as no surprise that I do not propose to *identify* “concepts” with anything specific in this book—I have no handy package to offer the gentleman worried about the “the”’s in a box. To be sure, since the informational substance of conceptual evaluations in situ usually concern quite palpable issues, a would-be formalist armed with lots of n-tuples can probably construct some ramshackle gizmo from such materials that will encapsulate the most important conceptual dimensions pertinent to a selected predicate. But there is little likelihood, I think, that the next concept down the road can be built of similar bricks. This is why I think

offhanded appeal to phrases like the “realm of concepts” can prove so pernicious—our
tendency to lump dissimilar foundations together represents a much greater problem
than any Fregean tendency to elevate abstracta to semi-Platonic deification.

Our common talk of “attributes” or “properties,” at least as I shall employ these
phrases, represents a somewhat different affair, for these terms often serve to capture
the range of objective physical traits that determine which activities are possible in this
universe of ours. These worldly features frame the backdrop against which a successful
language grows and we can’t understand the strategies of a usage until we map out the
external behaviors to which its gambits respond. Unfortunately, the classical picture
muddles these matters by generically confusing its concepts with objective attributes.
But these are matters we will sort through later (5,vii); our central focus will always be
on the term “concept” in its multiple roles as an evaluator of human capacity.

A prominent philosopher once attempted to press upon me sweeping (and rather
alarming) generalizations about the “nature of science” without benefit of any illus-
tration whatsoever. I was having trouble determining whether his claims represented
vacuous truisms or patent falsehoods (stabs at grandeur frequently suffer this wobbling
infirmity). Accordingly, I invited my companion to sketch how his assertions might
work themselves out within the context of a concrete example. After some meandering
about the bush, he eventually began discussing electromagneticism in a manner that I
thought traded upon an equivocation in the term “potential.” After some niggling about
these issues on my part, my friend banged his hand on the table and declared, “Damn it,
Wilson, sometimes you need to look at the big picture!”

I would expect that the discussion of the chapter now concluding qualifies as
cineramic enough for anyone’s tastes. Now I confront the less compliant task of per-
suading my readers that sense can be made of it! Our first order of business is to release
from the shackles of Gleichshaltung some of the varieties of diverse theme that naturally
emerge within the circuits of everyday conceptual evaluation and become formally
codified into the classical picture. At the same time we need to gain a hearty respect for
the mischievous ways in which wispy strands of ur-philosophy sometimes impel us upon
unhappy crusades. For these twin purposes I have assembled several parables that
attempt to exhibit some of the flow and eddy of everyday conceptual discussion. I
suggest that we now ramble leisurely over a certain span of ur-philosophical terrain,
upturning rocks and inspecting curiosities as we wander. As we explore my little stories,
we must practice a certain measure of patience, for the territory where concepts and
their kin dwell is sufficiently tortuous that the natives gleefully await the tourist who
arrives with an agenda and a map.

After tracing through several examples in the next chapter of unfortunate ur-philoso-
sphizing, I will provide a diagnosis (borrowing standard tools from applied mathematics)
of the underlying circumstances that fuel these unhappy excursions. To those with
a philosophical background, Chapter 2 may seem simply like a rehearsal of the old
debates about the “objectivity” of color, dressed up in greater more practical salience. In
truth, greater territory is covered than that, but since the chapter is rather long, some
readers may prefer to skip lightly past its thickets and proceed to Chapter 3 which
presents more novel material. For the interested, however, Chapter 2 supplies a fairly accurate picture of how Mighty Systems from little acorns grow and should indicate why some care in the matter of linguistic mechanics is called for before we set off to be Philosophers. Eventually, we will find, even after this point, that we have not yet drunk deeply enough of the well waters of ur-philosophy, so we will return in Chapter 8 for a second dose.

As indicated earlier, I have assembled as an appendix to Chapter 3 a somewhat lengthy catalog of the tenets I regard as typical of classical thinking, drawn largely from Russell’s Problems of Philosophy (although supplemented with additional themes I regard as compatible with its spirit). As such, this list can be consulted now, although it makes for rather dry reading (the reader is better advised to read the original Russell, which is delightful). In the book proper, I prefer to allow the classical themes I wish to discuss to emerge naturally, in the context of the practical dilemmas that call them forth. I have appended this list mainly so that the curious won’t find my continuing allusions to the “classical picture” intolerably vague.

I might indicate, by the way, that the term “classical theory of concepts,” is sometimes employed in the psychological literature to designate the doctrine that all of our concepts are definable in terms of restricted primitives, particularly of a sensory nature. This is a far more restrictive claim than any in my montage and is not included here.

Finally, despite the classical roster’s bulk, it should, nonetheless, be considered as merely a framework rather than a theory worthy of the name, largely because, as it stands, it avoids making concrete pronouncements about the contents of specific concepts (as they say in Texas, it is largely “all hat and no cattle”). When the project of “filling in the contents” is attempted, the entire edifice tends to turn unstable, rather like one of those alpine resorts in the comic novels which have been fabulously turned out in the latest and most extravagant amenities, but when the first guests arrive, our hapless manager/hero finds that Princess Madeleine has been booked into a room without a working bath, which forces him to open the connecting passage to suite 137, which is unfortunately occupied by the Smiths of Omaha who need to be transferred to the fifth floor. But the Rajah keeps his harem there, and so on . . . , until the entire establishment degenerates into riotous farce. As we’ll see in the next chapter, the classical realm of concepts sometimes resembles such a hotel: redness can’t be booked in the same room with being rectangular, so it’ll have to lodge with subjectivity, but when that happens, we lose most of the external world behind a veil. And so on to very strange conclusions.

---