PROLOGUE

Language, Culture, and Thought

"There are four tongues worthy of the world's use," says the Talmud: "Greek for song, Latin for war, Syriac for lamentation, and Hebrew for ordinary speech." Other authorities have been no less decided in their judgment on what different languages are good for. The Holy Roman Emperor Charles V, king of Spain, archduke of Austria, and master of several European tongues, professed to speaking "Spanish to God, Italian to women, French to men, and German to my horse."

A nation's language, so we are often told, reflects its culture, psyche, and modes of thought. Peoples in tropical climes are so laid-back it's no wonder they let most of their consonants fall by the wayside. And one need only compare the mellow sounds of Portuguese with the harshness of Spanish to understand the quintessential difference between these two neighboring cultures. The grammar of some languages is simply not logical enough to express complex ideas. German, on the other hand, is an ideal vehicle for formulating the most precise philosophical profundities, as it is a particularly orderly language, which is why the Germans have such orderly minds. (But can one not hear the goose step in its gauche, humorless sounds?) Some languages don't even have a

future tense, so their speakers naturally have no grasp of the future. The Babylonians would have been hard-pressed to understand *Crime and Punishment*, because their language used one and the same word to describe both of these concepts. The craggy fjords are audible in the precipitous intonation of Norwegian, and you can hear the dark *l*'s of Russian in Tchaikovsky's lugubrious tunes. French is not only a Romance language but the language of romance par excellence. English is an adaptable, even promiscuous language, and Italian—ah, Italian!

Many a dinner table conversation is embellished by such vignettes, for few subjects lend themselves more readily to disquisition than the character of different languages and their speakers. And yet should these lofty observations be carried away from the conviviality of the dining room to the chill of the study, they would quickly collapse like a soufflé of airy anecdote—at best amusing and meaningless, at worst bigoted and absurd. Most foreigners cannot hear the difference between rugged Norwegian and the endless plains of Swedish. The industrious Protestant Danes have dropped more consonants onto their icy windswept soil than any indolent tropical tribe. And if Germans do have systematic minds, this is just as likely to be because their exceedingly erratic mother tongue has exhausted their brains' capacity to cope with any further irregularity. English speakers can hold lengthy conversations about forthcoming events wholly in the present tense (I'm flying to Vancouver next week . . .) without any detectable loosening in their grip on the concepts of futurity. No language—not even that of the most "primitive" tribes—is inherently unsuitable for expressing the most complex ideas. Any shortcomings in a language's ability to philosophize simply boil down to the lack of some specialized abstract vocabulary and perhaps a few syntactic constructions, but these can easily be borrowed, just as all European languages pinched their verbal philosophical tool kit from Latin, which in turn lifted it wholesale from Greek. If speakers of any tribal tongue were so minded, they could easily do the same today, and it would be eminently possible to deliberate in Zulu about the respective merits of empiricism and rationalism or to hold forth about existentialist phenomenology in West Greenlandic.

If musings on nations and languages were merely aired over aperitifs,

they could be indulged as harmless, if nonsensical, diversions. But as it happens, the subject has also exercised high and learned minds throughout the ages. Philosophers of all persuasions and nationalities have lined up to proclaim that each language reflects the qualities of the nation that speaks it. In the seventeenth century, the Englishman Francis Bacon explained that one can infer "significant marks of the genius and manners of people and nations from their languages." "Everything confirms," agreed the Frenchman Étienne de Condillac a century later, "that each language expresses the character of the people who speak it." His younger contemporary, the German Johann Gottfried Herder, concurred that "the intellect and the character of every nation are stamped in its language." Industrious nations, he said, "have an abundance of moods in their verbs, while more refined nations have a large amount of nouns that have been exalted to abstract notions." In short, "the genius of a nation is nowhere better revealed than in the physiognomy of its speech." The American Ralph Waldo Emerson summed it all up in 1844: "We infer the spirit of the nation in great measure from the language, which is a sort of monument to which each forcible individual in a course of many hundred years has contributed a stone."

The only problem with this impressive international unanimity is that it breaks down as soon as thinkers move on from the general principles to reflect on the particular qualities (or otherwise) of particular languages, and about what these linguistic qualities can tell about the qualities (or otherwise) of particular nations. In 1889, Emerson's words were assigned as an essay topic to the seventeen-year-old Bertrand Russell, when he was at a crammer in London preparing for the scholarship entrance exam to Trinity College, Cambridge. Russell responded with these pearls: "We may study the character of a people by the ideas which its language best expresses. French, for instance, contains such words as 'spirituel,' or 'l'esprit,' which in English can scarcely be expressed at all; whence we naturally draw the inference, which may be confirmed by actual observation, that the French have more 'esprit,' and are more 'spirituel' than the English."

Cicero, on the other hand, drew exactly the opposite inference from the lack of a word in a language. In his *De oratore* of 55 BC, he embarked

on a lengthy sermon about the lack of a Greek equivalent for the Latin word *ineptus* (meaning "impertinent" or "tactless"). Russell would have concluded that the Greeks had such impeccable manners that they simply did not need a word to describe a nonexistent flaw. Not so Cicero: for him, the absence of the word was a proof that the fault was so widespread among the Greeks that they didn't even notice it.

The language of the Romans was itself not always immune to censure. Some twelve centuries after Cicero, Dante Alighieri surveyed the dialects of Italy in his *De vulgari eloquentia* and declared that "what the Romans speak is not so much a vernacular as a vile jargon . . . and this should come as no surprise, for they also stand out among all Italians for the ugliness of their manners and their outward appearance."

No one would dream of entertaining such sentiments about the French language, which is not only romantic and *spirituel* but also, of course, the paragon of logic and clarity. We have this on no lesser authority than the French themselves. In 1894, the distinguished critic Ferdinand Brunetière informed the members of the Académie française, on the occasion of his election to this illustrious institution, that French was "the most logical, the clearest, and the most transparent language that has ever been spoken by man." Brunetière, in turn, had this on the authority of a long line of savants, including Voltaire in the eighteenth century, who affirmed that the unique genius of the French language was its clearness and order. And Voltaire himself owed this insight to an astonishing discovery made a whole century earlier, in 1669, to be precise. The French grammarians of the seventeenth century had spent decades trying to understand why it was that French possessed clarity beyond all other languages in the world and why, as one member of the Académie put it, French was endowed with such clarity and precision that simply translating into it had the effect of a real commentary. In the end, after years of travail, it was Louis Le Laboureur who discovered in 1669 that the answer was simplicity itself. His painstaking grammatical researches revealed that, in contrast to speakers of other languages, "we French follow in all our utterances exactly the order of thought, which is the order of Nature." No wonder, then, that French can never be obscure. As the later thinker Antoine de Rivarol put it: "What is

not clear may be English, Italian, Greek, or Latin" but "ce qui n'est pas clair n'est pas français."

Not all intellectuals of the world unite, however, in concurring with this analysis. Equally distinguished thinkers—strangely enough, mostly from outside France—have expressed different opinions. The renowned Danish linguist Otto Jespersen, for example, believed that English was superior to French in a whole range of attributes, including logic, for as opposed to French, English is a "methodical, energetic, business-like and sober language, that does not care much for finery and elegance, but does care for logical consistency." Jespersen concludes: "As the language is, so also is the nation."

Great minds have churned out even richer fare when advancing from the issue of how language *reflects* the character of its speakers to the grander question of how language *influences* the thought processes of its speakers. Benjamin Lee Whorf, to whom we shall return in a later chapter, captivated a whole generation when he taught that our habit of separating the world into objects (like "stone") and actions (like "fall") is not a true reflection of reality but merely a division thrust upon us by the grammar of European languages. According to Whorf, American Indian languages, which combine the verb and the object into one word, impose a "monistic view" on the universe, so their speakers would simply not understand our distinction between objects and actions.

A generation later, George Steiner reasoned in his 1975 book, *After Babel*, that the "conventions of forwardness in our syntax," our "articulate futurity," or, in other words, the existence of the future tense, is what gives us hope for the future, saves us from nihilism, even from mass suicide. "If our system of tenses was more fragile," said Steiner, "we might not endure." (He was clearly touched by prophetic inspiration, for dozens of languages that do not possess a future tense are becoming extinct every year.)

More recently, one philosopher has revolutionized our understanding of Tudor history by uncovering the real cause for Henry's break with the pope. The Anglican revolution, he established, was not a result of the king's desperate wish for an heir, as previously assumed, nor was

it a cynical ploy to siphon off the Church's wealth and property. Rather, the birth of Anglican theology ensued inevitably from the exigencies of the English language: English grammar, being halfway between French and German, compelled English religious thought inexorably toward a position halfway between (French) Catholicism and (German) Protestantism.

In their pronouncements on language, culture, and thought, it seems that big thinkers in their *grandes œuvres* have not always risen much above little thinkers over their *hors d'œuvre*. Given such an unappetizing history of precedents, is there any hope of getting something savory out of the discussion? Once one has sifted out the unfounded and the uninformed, the farcical and the fantastic, is there anything sensible left to say about the relation between language, culture, and thought? Does language reflect the culture of a society in any profound sense, beyond such trivia as the number of words it has for snow or for shearing camels? And even more contentiously, can different languages lead their speakers to different thoughts and perceptions?

For most serious scholars today, the answer to all these questions is a resounding no. The dominant view among contemporary linguists is that language is primarily an instinct, in other words, that the fundaments of language are coded in our genes and are the same across the human race. Noam Chomsky has famously argued that a Martian scientist would conclude that all earthlings speak dialects of the same language. Deep down, so runs the theory, all languages share the same universal grammar, the same underlying concepts, the same degree of systemic complexity. The only important aspects of language, therefore, or at least the only ones worth investigating, are those that reveal language as an expression of innate human nature. Finally, there is a broad consensus that if our mother tongue influences the way we think at all, any such influence is negligible, even trivial—and that fundamentally we all think in the same way.

In the pages to follow, however, I will try to convince you, probably

against your initial intuition, and certainly against the fashionable academic view of today, that the answer to the questions above is—yes. In this plaidoyer for culture, I will argue that cultural differences are reflected in language in profound ways, and that a growing body of reliable scientific research provides solid evidence that our mother tongue can affect how we think and how we perceive the world. But before you relegate this book to the crackpot shelf, next to last year's fad-diet recipes and the *How to Bond with Your Goldfish* manual, I give you my solemn pledge that we will not indulge in groundless twaddle of any kind. We shall not be imposing monistic views on any universes, we shall not soar to such lofty questions as which languages have more "esprit," nor shall we delve into the mysteries of which cultures are more "profound." The problems that will occupy us in this book are of a very different kind.

In fact, the areas of culture we shall be concerned with belong to the most down-to-earth level of everyday life, and the aspects of language we shall encounter are on the most down-to-earth level of everyday speech. For it turns out that the most significant connections between language, culture, and thought are to be found where they are least expected, in those places where healthy common sense would suggest that all cultures and all languages should be exactly the same.

The high-level cultural differences that we immediately spot—in musical taste, sexual mores, dress code, or table manners—are in some sense superficial, precisely because we are so keenly aware of them: we know that pornography is just a matter of geography, and we are under no illusion that peoples around the globe share the same preferences in music or hold their forks in the same way. But culture can leave deeper marks exactly where we do not recognize it as such, where its conventions have been imprinted so indelibly on impressionable young minds that we grow up to take them for something else entirely.

If all these statements are to begin to make some sense, however, we first need to extend the concept of culture way beyond its normal use in everyday language. What is your first reaction when you hear the word "culture"? Shakespeare? String quartets? Curling the little finger on the

teacup? Naturally, the way you understand "culture" depends on which culture you come from, as a quick glance through three lexicographic lenses will reveal:

> Culture: cultivation, the state of being cultivated, refinement, the result of cultivation, a type of civilization.
>
> Chambers English dictionary

> Kultur: Gesamtheit der geistigen und künstlerischen Errungenschaften einer Gesellschaft.
>
> *(The totality of intellectual and artistic achievements of a society.)*
>
> Störig German dictionary

> Culture: Ensemble des moyens mis en œuvre par l'homme pour augmenter ses connaissances, développer et améliorer les facultés de son esprit, notamment le jugement et le goût.
>
> *(The collection of means employed by man to increase his knowledge, develop and improve his mental faculties, notably judgment and taste.)*
>
> ATILF French dictionary

There is little, some would no doubt argue, that better confirms entrenched stereotypes about three great European cultures than the way they understand the concept of "culture" itself. Is the Chambers definition not the quintessence of Englishness? Rather amateurish in its noncommittal list of synonyms, politely avoiding any awkward definitions. And what could be more German than the German? Mercilessly thorough, overly intellectual, knocking the concept on the head with charmless precision. And as for the French: grandiloquent, hopelessly idealistic, and obsessed with *le goût*.

When anthropologists talk of "culture," however, they use the word in a rather different sense from all of the definitions above, and in a far broader meaning. The scientific concept of "culture" emerged in Germany in the midnineteenth century but was first articulated explicitly by the English anthropologist Edward Tylor in 1871. Tylor started his seminal book, *Primitive Culture*, with the following definition, which is

still quoted today in almost any introduction to the subject: "Taken in its wide ethnographic sense, [culture] is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society." Culture is understood here as all human traits that are not the result of instinct—in other words, as a synonym for nurture as opposed to nature. Culture thus encompasses all aspects of our behavior that have evolved as social conventions and are transmitted through learning from generation to generation. Scientists sometimes even speak of "chimpanzee culture," when certain groups of chimps use sticks and stones in a way that differs from that of neighboring groups and when this knowledge can be shown to have been transmitted through imitation rather than through the genes.

Human culture usually amounts to rather more than sticks and stones, of course. But the type of culture that will concern us in this book has little to do with high art, towering intellectual accomplishments, or impeccable refinement in manners and taste. The focus here will be on those everyday cultural traits that are impressed so deeply in our mind that we do not recognize them as such. In short, the aspects of culture that will be explored here are those where culture masquerades as human nature.

LANGUAGE AS A MIRROR

Is language one of these aspects? Is it an artifact of culture or a bequest of nature? If we hold language up as a mirror to the mind, what do we see reflected there: human nature or the cultural conventions of our society? This is the central question of the first part of the book.

On one level, even posing the question seems rather strange, because language is a cultural convention that doesn't masquerade as anything but a cultural convention. Languages vary greatly across the globe, and everyone knows that the particular language a child happens to learn is just an accident of the particular culture she stumbled into. A Bostonian toddler will grow up speaking Bostonian English because she happened to be born in a Bostonian English environment, not because she

has Bostonian genes. And a newborn resident of Beijing will eventually speak Mandarin Chinese because he grows up in a Mandarin environment, not because of any genetic predisposition. If you switch the babies, the Beijing boy will end up speaking perfect Bostonian English and the Bostonian girl will end up speaking perfect Mandarin. There are millions of walking proofs that attest to this fact.

What is more, the most obvious difference between languages is that they choose different names, or labels, for concepts. And as everyone knows, these labels lay no claims to being anything other than cultural conventions. Apart from some marginal cases of onomatopoeia, such as the cuckoo bird, where the label does try to reflect the nature of the bird it denotes, the vast majority of labels are arbitrary. A rose by any other name would smell as douce, γλυκό, édes, zoet, sladká, sød, hoş, makea, magus, dolce, ngọt, or even sweet. The labels are thus fairly and squarely within the remit of each culture and have almost nothing of nature in them.

But what happens when we try to peer further through the language glass, beyond the superficial level of the labels, at the concepts that lurk behind them? Are the concepts behind the English labels "rose" or "sweet" or "bird" or "cat" just as arbitrary as the labels themselves? Is the way our language carves up the world into concepts also merely a cultural convention? Or is it nature that has drawn for us the distinguishing boundary between "cat" and "dog" or "rose" and "bird"? If the question comes across as rather abstract, let's put it to a practical test.

Imagine you are browsing in a forgotten corner of an old library and by chance you come across a musty eighteenth-century manuscript that seems never to have been opened since it was deposited there. It is entitled *Adventures on the Remote Island of Zift*, and it appears to relate in much detail a mysterious desert island that the author claims to have discovered. You leaf through it with trembling hands and start reading a chapter called "A Farther Account of the Ziftish Tongue Wherein Its Phantastick Phænomena Are Largely Describ'd":

> While we were at Dinner, I made bold to ask the Names of several things in their Language; and those noble Persons delighted to give me

Answers. Although my principal Endeavour was to learn, yet the Difficulty was almost insuperable, the whole Compass of their Thoughts and Mind being shut up to such Distinctions as to us appear most natural. They have, for example, no Word in their Tongue by which our Idea of B i r d can be expressed, nor are there any Terms, wherein that Language can express the Notion of a R o s e. For in their stead, Ziftish employs one Word, B o s e, which signifies white Roses and all Birds save those with crimson Chests, and yet another Word, R i r d, which betokens Birds with crimson Chests and all Roses save white ones.

Waxing ever more loquacious after his third Glass of Liquor, my Host began to orate a Fable he recollected from his Childhood: how the Bose and the Rird met their woful End: "A bright plumed Rird and a mellifluous yellow Bose alighted on a high branch and fell a-twittering. They presently began to debate which of the twain sang the sweeter. Having failed in reaching a firm Conclusion, the Rird proposed that they should seek the Judgement of those Emblems of Beauty among the Flowers in the Garden below. Without more ado, they fluttered down to a fragrant Bose and a budding red Rird, and humbly begged their Opinion. The yellow Bose carolled with slender voice, and the Rird piped his quavering Air. Alas, neither the Bose nor the Rird could distinguish the Bose's cascading Cadences from the tremulous Trills of the Rird. Great was the Indignation of the proud Warblers. The Rird, his Rage inflamed, fell upon the red Rird and plucked off her petals, and the yellow Bose, his Vanity sore wounded, attacked the Bose with equal vehemence. Forthwith both Arbitresses stood naked and stripp'd of their petals, the Bose no longer fragrant and the Rird no longer red."

Apprehending my Confusion, my Host intoned the Moral with much wagging of his Finger: "And thus remember: never fail to distinguish a Rird from a Bose!" I offered him my sincere Assurance that I would endeavour never to do so.

What do you take this precious document to be? An undiscovered diary of an early explorer or a lost sequel to *Gulliver's Travels*? If you opted for fiction, it is probably because your common sense tells you

that the purported Ziftish manner of distinguishing concepts is fundamentally implausible, and that it is patently unnatural to combine red-chested birds and non-white roses into one concept, "rird," and to lump other birds together with white roses into the concept "bose." And if the Ziftish distinction between rird and bose is unnatural, the English division between bird and rose must in some way be natural. Healthy common sense suggests, therefore, that while languages can bestow labels entirely at whim, they cannot apply quite the same whimsy to the concepts behind the labels. Languages cannot group together arbitrary sets of objects, since it is birds of a feather that flock together under one label. Any language has to categorize the world in a way that brings together things that are similar in reality—or at least in our perception of reality. So it is natural for different types of birds to be named as one concept, but it is unnatural for a random set of birds and a random set of roses to be gathered together under one label.

In fact, even a cursory observation of the way children acquire language will confirm that concepts such as "bird" or "cat" or "dog" have something natural about them. Children ask almost all imaginable (and many unimaginable) questions. But have you ever heard a child saying, "Mommy, is this a cat or dog?" Rack your brains and rummage through your memories as hard as you can, you are unlikely to recall a child asking, "How can I tell if this is a bird or a rose?" While children always need to be taught the labels for such concepts in the particular language of their society, they don't need to be told how to distinguish between the concepts themselves. It is quite enough for a toddler to see a few pictures of a cat in a picture book, and the next time she sees a cat, even if it's ginger rather than tabby, even if it has longer hair, a shorter tail, only one eye, and a hind leg missing, she will still recognize it as a cat rather than a dog or bird or rose. Children's instinctive grasp of such concepts shows that human brains are innately equipped with powerful pattern-recognition algorithms, which sort similar objects into groups. So concepts such as "cat" or "bird" must somehow correspond to this inborn aptitude to categorize the world.

So far, then, we seem to have arrived at a simple answer to the question of whether language reflects culture or nature. We have drawn a neat map and divided language into two distinct territories: the domain of labels and the land of concepts. The labels reflect cultural conventions, but the concepts reflect nature. Each culture is free to bestow labels onto concepts as it pleases, but the concepts behind these labels have been formed by the dictates of nature. A great deal can be said for this partition. It is clear, simple, and elegant, it is intellectually and emotionally satisfying, and, last but not least, it has a respectable pedigree that extends all the way back to Aristotle, who wrote in the fourth century BC that, although the sounds of speech may differ across the races, the concepts themselves—or, as he called them, the "impressions of the soul"—are the same for the whole of mankind.

Are there any possible objections to this map? Just one: it bears scant resemblance to reality. The neat border we have just marked may be a pretty work of wishful cartography, but unfortunately it does not represent the actual power relations on the ground with any accuracy. For in practice, culture not only controls the labels, but embarks on incessant raids across the border into what ought to be the birthright of nature. While the distinction between some concepts, such as "cat" and "dog," may be delineated so clearly by nature that it is largely immune to culture's onslaught, cultural conventions do manage to meddle in the internal affairs of many other concepts, in ways that sometimes upset plain common sense. Just how deeply culture penetrates the land of concepts, and how difficult it can be to come to terms with this state of affairs, is something that will become clearer in the following chapters. But for the moment, we can start with a quick reconnaissance tour of a few of culture's strongholds across the border.

Consider first the realm of abstraction. What happens when we move away from simple physical objects like cats or birds or roses to abstract concepts such as "victory," "fairness," or "Schadenfreude"? Have such concepts also been decreed by nature? I once knew someone

who enjoyed saying that the French and the Germans have no mind. What he meant was that neither of their languages had a word for the English "mind," and he was right in one sense: neither French nor German has a single concept, with a single label, that covers exactly the range of meanings of the English concept "mind." If you ask a bilingual dictionary how to translate "mind" into French, the dictionary will explain patiently that it depends on the context. You will be given a list of possibilities, such as:

esprit (peace of mind = *tranquillité d'esprit*)
tête (it's all in the mind = *c'est tout dans la tête*)
avis (to my mind = *à mon avis*)
raison (his mind is going = *il n'a plus toute sa raison*)
intelligence (with the mind of a two-year-old = *avec l'intelligence d'un enfant de deux ans*)

Conversely, English does not have a single concept that covers exactly the range of meanings of the French *esprit*, as Bertrand Russell so spiritedly observed. Again, a dictionary would give a long list of different English words as possible translations, for instance:

wit (*avoir de l'esprit* = to have wit)
mood (*je n'ai pas l'esprit à rire* = I'm in no mood for laughing)
mind (*avoir l'esprit vif* = to have a quick mind)
spirit (*esprit d'équipe* = team spirit)

So concepts like "mind" or "*esprit*" cannot be natural in the way that "rose" or "bird" are; otherwise they would have been identical in all languages. As early as the seventeenth century, John Locke recognized that in the realm of abstract notions each language is allowed to carve up its own concepts—or "specific ideas," as he called them—in its own way. In his 1690 *Essay concerning Human Understanding*, he proved the point through the "great store of words in one language which have not any that answer them in another. Which plainly shows that those of one country, by their customs and manner of life, have found occasion to

make several complex ideas, and given names to them, which others never collected into specific ideas."

Nature's first concession to culture has not come as too much of a wrench, for even if the neat borderline between culture and nature has to be redrawn somewhat, the notion that cultural conventions are involved in determining the shape of abstract concepts is not seriously at odds with our basic intuition. After all, if instead of the story about the Ziftish concepts "bose" and "rird," the eighteenth-century travelogue reported that Ziftish didn't have a single word that corresponds to the English concept "fair" and that in lieu of it Ziftish uses the concept "just" in some contexts and "kind" in other contexts, our common sense would hardly be mobilized to march in protest.

But things quickly become less cozy when it transpires that culture interferes not just in the realm of abstraction but also in the simplest concepts of everyday discourse. Take pronouns such as "I," "you," or "we." Could anything be more elementary or more natural than these? Of course, no one who is aware of the existence of foreign languages would be under the illusion that the labels for such concepts are dictated by nature, but it seems unimaginable that any language would not have the actual concepts themselves. Suppose, for instance, you continue thumbing through the travelogue and come across the claim that Ziftish doesn't have a word that corresponds to English "we." Instead, the author alleges, Ziftish has three distinct pronouns: *kita*, which means "just the two of us, me and you," *tayo*, which means "me and you and someone else," and *kami*, which means "me and someone else, but not you." The author relates how tickled the Ziftians were to hear that for these three entirely different concepts English uses just one little word, a wee "we." You may dismiss the system our chimerical author has invented as a lame joke, but Tagalog speakers in the Philippines would disagree, because this is exactly how they speak.

The strain on plain common sense is only just beginning, though. One might naturally expect that at least the concepts that describe simple physical objects would all be the prerogative of nature. As long as we restrict ourselves to cats, dogs, and birds, this expectation is in fact largely borne out, because these animals are so distinctly shaped by

nature. But the moment nature shows the slightest doubt in its incision, culture is quick to pounce. Consider the parts of the human body, for instance. Among the simple physical things that matter most to our lives, it hardly gets any simpler or more physical than hands and toes and fingers and necks. And yet many of these allegedly distinct body parts were not delineated by nature with much zeal. The arm and the hand, for example, are the body's equivalent to the continents Asia and Europe—are they really one thing or two? It turns out that the answer depends on the culture you grew up in. There are many languages, my mother tongue included, that treat the hand and the arm as one concept and use the same label for both. If a Hebrew speaker tells you that when she was a child she got an injection in her hand, this is not because her doctors were sadistic, but simply because she is thinking in a language that doesn't make the distinction as a matter of course, so she has forgotten to use a different word for that particular part of the hand that English curiously insists on calling an "arm." On the other arm, there was a fairly long period when my daughter, who had learned that *yad* in Hebrew meant "hand," objected loudly whenever I used *yad* to refer to the arm, even when we spoke in Hebrew. She would point at the arm and explain to me in indignant tones: *ze lo yad* (it's not *yad*), *ze arm* (it's "arm")! The fact that "hand" and "arm" are different things in one language but the same thing in another is not so easy to grasp.

There are also languages that use the same word for "hand" and "finger," and a few languages, such as Hawaiian, even manage with using just one concept for the three distinct English body parts "arm," "hand," and "finger." Conversely, English lumps together certain body parts that speakers of other languages treat as distinct concepts. Even after two decades of speaking English, I still sometimes get tied up in knots with the neck. Someone starts talking about his neck, and I naturally take him at his word and assume he really means his neck—the part of the body that in my mother tongue is called *tsavar*. But after a while it transpires that he hasn't been talking about the neck at all. Or rather, he was talking about the neck, but he didn't mean the *tsavar*. What he actually meant was *oref*, the "back of the neck," that body part which English most carelessly and inconsiderately conjoins with the front of the neck

into one concept. In Hebrew, the neck (*tsavar*) refers only to the front part of this tube, whereas the back part, *oref*, has an entirely unrelated name and is considered just as distinct as the English "back" is from "belly" or "hand" is from "arm."

Nature's concessions to culture are now starting to feel a little more grudging. While it is hardly unsettling that abstract concepts such as "mind," or "esprit," are culturally dependent, we are getting to the edge of the comfort zone with the notion that pronouns like "we" or body parts like "hand" or "neck" all depend on the particular cultural conventions of our society. But if the forays of culture into the realm of concepts are beginning to hurt a little, all this is but a pinprick compared with the pains caused by culture's interference in the area that will occupy us in the first part of the book. In this field of language, culture's incursion into the land of concepts so offended, even outraged, plain common sense that for decades the defenders of nature were mobilized to fight to their last drop of ink to uphold her cause. In consequence, this enclave has been at the center of a 150-year war between the proponents of nature and of culture, a conflict that is showing no sign of abating. This battleground is the language of color.

Why should color, of all things, be at the center of so much crossfire? Perhaps because in meddling with such a deep and seemingly instinctive area of perception, culture camouflages itself as nature more successfully there than in any other area of language. There is nothing remotely abstract, theoretical, philosophical, hypothetical, or any other -cal, so it seems, about the difference between yellow and red or between green and blue. And since colors are on the ground level of perception, the concepts of color would appear to be the prerogative of nature. And yet nature has been rather negligent in staking out her boundaries on the spectrum. The colors form a continuum: green does not become blue at any definite point, but blurs gradually into blue through millions of shades of teal, turquoise, and aquamarine (see figure 1 in insert). When we speak about colors, however, we impose distinct boundaries on this variegated swathe: "yellow," "green," "blue," and so on. But is our particular way of dividing the color space a dictate of nature? Are the concepts "yellow" or "green" universal constants of the human race that

were decreed by the biological makeup of the eye and brain? Or are they arbitrary cultural conventions? Could the boundaries have been set differently? And why should anyone dream up such abstruse hypothetical questions anyway?

As it happens, the controversy over the concepts of color was not conjured up by any abstract philosophical ruminations but arose in the wake of entirely practical observations. A series of discoveries made in the middle of the nineteenth century led to the startling revelation that mankind's relation to color has not always been as clear as it seems to us now, and that what appears obvious to us caused no end of difficulty to the ancients. The ensuing mission to discover the source of the "color sense" is a gripping Victorian adventure story, an episode in the history of ideas that can rival the derring-do of any nineteenth-century explorer. The color expedition reached the remotest corners of the earth, got tangled up with the fiercest controversies of the day—evolution, heredity, and race—and was driven by a motley cast of unlikely heroes: a celebrated statesman whose intellectual feats are now almost entirely unknown, an Orthodox Jew who was led by his philological discoveries to the most heterodox evolutionary thoughts, an eye doctor from a provincial German university who set a whole generation in pursuit of a bright red herring, and a Cambridge don, dubbed the "Galileo of anthropology," who finally put the quest back on course, against his own better judgment.

The nineteenth-century struggle to understand what it is that separates us from the ancients, the eye or the tongue, turned in the twentieth century into an all-out battle over the concepts of language, in which opposing worldviews were pitted against one another—universalism against relativism, and nativism against empiricism. In this world war of isms, the spectrum assumed totemic importance, as proponents of both nature and culture came to view their hold over color as decisive for the control over language in general. At different times, each side declared color as the trump card in their wider argument, and received opinion thus swung from one extreme to the other, from nature to culture, and in recent decades back to nature again.

The vicissitudes of this controversy make color an ideal test case for adjudicating over nature's and culture's conflicting claims on the concepts

of language. Or put another way: the seemingly narrow strip of color can serve as a litmus test for nothing less than the question of how deep the communalities are between the ways human beings express themselves, and how superficial the differences—or vice versa!

The discussion so far may have given the impression that there is nothing more to language than a collection of concepts and their corresponding labels. But in order to communicate subtle thoughts involving intricate relations between different concepts, language needs much more than a list of concepts—it needs a grammar, a sophisticated system of rules for organizing concepts into coherent sentences. Able as as be coherent communicate concepts even example for for grammar in likes many not of one one ordering rules rules sentence the the the thoughts to with without without words would. (I mean: without the rules of grammar, for example without the rules for ordering words in the sentence, one would not be able to communicate coherent thoughts, even with as many concepts as one likes.) And as it happens, the debates between the advocates of nature and of nurture, between nativists and culturalists, universalists and relativists have raged just as fiercely over grammar as over the concepts of language. Are the rules of grammar—word order, syntactic structures, word structure, sound structure—encoded in our genes, or do they reflect cultural conventions?

The dominant view among linguists today—advanced by Noam Chomsky and the influential research program that he has inspired—is that most of the grammar of language, that is to say, of all human languages, is innate. This school of thought, which is known as "nativist," contends that the rules of universal grammar are coded in our DNA: humans are born with brains preequipped with a specific tool kit of complex grammatical structures, so that children do not need to learn these structures when they acquire their mother tongue. For the nativists, therefore, grammar reflects universal human nature, and any differences between the grammatical structures of different languages are superficial and of little consequence.

According to the dissenting minority view, there is scant evidence to

show that any specific rules of grammar are prewired in the brain and there is no need to invoke genes in order to account for grammatical structures, because these can be explained more simply and more plausibly as the product of cultural evolution and as a response to the exigencies of efficient communication. In *The Unfolding of Language*, I argued for this latter view, by showing how a sophisticated system of specific grammatical rules could have evolved from very humble beginnings, driven by forces of change that are motivated by broad traits of human nature, such as laziness (effort saving in pronunciation) and a need to impose order on the world.

This book will not dwell on the grammatical side of the great nature-culture controversy, but there is one aspect of grammar that will need to come under the magnifying glass, because there the role of culture is especially and almost universally underappreciated. This aspect is complexity. Does the complexity of a language reflect the culture and society of its speakers, or is it a universal constant determined by human nature? If the subject of color was the most bitterly contested area in the debate over concepts, the question of complexity is undoubtedly the issue in the battle over grammar that has been least contested—but ought to be. For decades, linguists of all persuasions, both nativists and culturalists, have been trotting out the same party line: all languages are equally complex. But I will argue that this refrain is merely an empty slogan and that the evidence suggests that the complexity of some areas of grammar reflects the culture of the speakers, often in unexpected ways.

LANGUAGE AS A LENS

If the questions explored in the first part of the book have stirred up fierce debates and raging emotions, these are but storms in a teacup compared with the gales of discord that beset the subject of the second part, the question of the mother tongue's influence on our thoughts. Could language have more than a passive role as a reflection of cultural differences and be an active instrument of coercion through which culture imposes its conventions on our mind? Do different languages

lead their speakers to different perceptions? Is our particular language a lens through which we view the world?

At first sight, there seems to be nothing unreasonable about posing this question. Since culture has a great deal of leeway in defining concepts, it is—in principle—entirely sensible to ask whether our culture could affect our thoughts through the linguistic concepts it imposes. But while the question seems perfectly kosher in theory, in practice the mere whiff of the subject today makes most linguists, psychologists, and anthropologists recoil. The reason why the topic causes such intense embarrassment is that it carries with it a baggage of intellectual history which is so disgraceful that the mere suspicion of association with it can immediately brand anyone a fraud. The problem is that any influence of language on thought is very difficult to prove or disprove empirically, so that the subject has traditionally afforded a perfect platform to those who enjoy flashing their fantasies without the least danger of being caught out by the fact police. Like flies to the honeypot or philosophers to the unknowable, the most inspired charlatans, the most virtuoso con artists, not to mention hordes of run-of-the-mill crackpots, have been drawn to expostulate on the influence of the mother tongue on its speakers' thoughts. The second part of the book starts with a short sample from this Decameron of excesses, and concentrates on the most notorious of the con men, Benjamin Lee Whorf, who seduced a whole generation into believing, without a shred of evidence, that American Indian languages lead their speakers to an entirely different conception of reality from ours.

Today, partly because of this outrageous legacy, most respectable linguists and psychologists either categorically deny that the mother tongue can have any influence on speakers' thoughts, or claim that any such influence is at best negligible, even trivial. Nevertheless, in recent years some intrepid researchers have attempted to apply sound scientific methods to this question, and the findings that have emerged from their research have already revealed surprising ways in which the idiosyncrasies of the mother tongue do after all affect the mind. The second part of the book presents three examples where such influence seems to me to have been demonstrated most plausibly. As the story unfolds, it

will become evident that the credible influence of language on speakers' thinking is of a radically different kind from what was touted in the past. Whorf's muse floated in the loftiest levels of cognition, fantasizing about how languages could determine speakers' capacity for logical reasoning and how speakers of such and such language would not be able to understand such and such an idea because their language does not make such and such a distinction. The effects that have emerged from recent research, however, are far more down to earth. They are to do with the habits of mind that language can instill on the ground level of thought: on memory, attention, perception, and associations. And while these effects may be less wild than those flaunted in the past, we shall see that some of them are no less striking for all that.

But first—off to the fighting over the rainbow.