THROUGH the LANGUAGE GLASS

Why the World Looks Different in Other Languages

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PICADOR

Naming the Rainbow

London, 1858. On the first of July, the Linnean Society, in its magnificent new quarters at Burlington House in Piccadilly, will hear two papers by Charles Darwin and Alfred Russel Wallace announcing jointly a theory of evolution by natural selection. Before long, the flame will flare up and illuminate the intellectual firmament, leaving no corner of human reason untouched. But although the wildfire of Darwinism will catch up with us soon enough, we do not begin quite there. Our story starts a few months earlier and a few streets away, in Westminster, with a rather improbable hero. At forty-nine, he is already an eminent politician, member of Parliament for Oxford University, and ex-chancellor of the Exchequer. But he is still ten years away from becoming prime minister, and even further from being celebrated as one of Britain's greatest statesmen. In fact, the Right Honorable William Ewart Gladstone has been languishing on the opposition benches for the last three years. But his time has not been idly spent.

While out of office, he has devoted his legendary energies to the realm of the mind, and in particular to his burning intellectual passion: that ancient bard who "founded for the race the sublime office of the

poet, and who built upon his own foundations an edifice so lofty and so firm that it still towers unapproachably above the handiwork not only of common, but even of many uncommon men." Homer's epics are for Gladstone nothing less than "the most extraordinary phenomenon in the whole history of purely human culture." The *Iliad* and the *Odyssey* have been his lifelong companions and his literary refuge ever since his Eton schooldays. But for Gladstone, a man of deep religious conviction, Homer's poems are more than merely literature. They are his second Bible, a perfect compendium of human character and experience that displays human nature in the most admirable form it could assume without the aid of Christian revelation.

Gladstone's monumental oeuvre, his Studies on Homer and the Homeric Age, has just been published this March. Its three stout, doorstopping tomes of well over seventeen hundred pages sweep across an encyclopedic range of topics, from the geography of the Odyssey to Homer's sense of beauty, from the position of women in Homeric society to the moral character of Helen. One unassuming chapter, tucked away at the end of the last volume, is devoted to a curious and seemingly marginal theme, "Homer's perception and use of color." Gladstone's scrutiny of the Iliad and the Odyssey revealed that there is something awry about Homer's descriptions of color, and the conclusions Gladstone draws from his discovery are so radical and so bewildering that his contemporaries are entirely unable to digest them and largely dismiss them out of hand. But before long, Gladstone's conundrum will launch a thousand ships of learning, have a profound effect on the development of at least three academic disciplines, and trigger a war over the control of language between nature and culture that after 150 years shows no sign of abating.

Even in a period far less unaccustomed than ours to the concurrence of political power and greatness of mind, Gladstone's Homeric scholarship was viewed as something out of the ordinary. He was, after all, an active politician, and yet his three-volume opus would have been no mean achievement as the lifetime's work of a dedicated don. To some, especially political colleagues, Gladstone's devotion to the classics was the cause of resentment. "You are so absorbed in questions about Homer



William Ewart Gladstone, 1809-1898

and Greek words," a party friend complained, "that you are not reading newspapers or feeling the pulse of followers." But for the general public, Gladstone's virtuoso Homerology was a subject of fascination and admiration. The *Times* ran a review of Gladstone's book that was so long it had to be printed in two installments and would amount to more than thirty pages in this book's type. Nor did Gladstone's erudition fail to impress in intellectual circles. "There are few public men in Europe," was one professor's verdict, "so pure-minded, so quick-sighted, and so highly cultivated as Mr. Gladstone." In the following years, books by distinguished academics in Britain and even on the Continent were dedicated to Gladstone, "the statesman, orator, and scholar," "the untiring promoter of Homeric Studies."

Of course, there was a but. While Gladstone's prodigious learning, his mastery of the text, and his fertility of logical resources were universally praised, the reaction to many of his actual arguments was downright scathing. Alfred Lord Tennyson wrote that on the subject of Homer "most people think [Gladstone] a little hobby-horsical." A professor of Greek at Edinburgh University explained to his students that "Mr. Gladstone may be a learned, enthusiastic, most ingenious and subtle expositor of Homer—always eloquent, and sometimes brilliant; but he is not sound. His logic is feeble, almost puerile, his tactical movements, though full of graceful dash and brilliancy, are utterly destitute of sobriety, of caution,

and even of common sense." Karl Marx, himself an avid reader of Greek literature and not one to mince his words, wrote to Engels that Gladstone's book was "characteristic of the inability of the English to produce anything valuable in Philology." And the epic review in the *Times* (anonymous, as reviews were in those days) twists itself into the most convoluted of circumlocutions to avoid explicitly calling Gladstone a fool. It starts by declaring that "Mr. Gladstone is excessively clever. But, unfortunately for excessive cleverness, it affords one of the aptest illustrations of the truth of the proverb that extremes meet." The review ends, nearly thirteen thousand words later, with the regret that "so much power should be without effect, that so much genius should be without balance, that so much fertility should be fertility of weeds, and that so much eloquence should be as the tinkling cymbal and the sounding brass."

What was so wrong with Gladstone's Studies on Homer? For a start, Gladstone had committed the cardinal sin of taking Homer far too seriously. He was treating Homer "with an almost Rabbinical veneration," snorted the Times. In an age that prided itself on its newly discovered skepticism, when even Holy Scripture's authority and authorship were beginning to yield to the scalpel of German textual criticism, Gladstone was marching to the beat of a different drum. He dismissed out of hand the theories, much in vogue at the time, that there had never been a poet called Homer and that the Iliad and the Odyssey were instead a patchwork of a great number of popular ballads cobbled together from different poets over many different periods. For him, the Iliad and the Odyssey were composed by a single poet of transcendental genius: "I find in the plot of the Iliad enough beauty, order, and structure to bear an independent testimony to the existence of a personal and individual Homer as its author."

Even more distasteful to his critics was Gladstone's insistence that the story of the *Iliad* was based on at least a core of historical fact. To the enlightened academics of 1858, it seemed childishly credulous to assign any historical value to a story of a ten-year Greek siege of a town called Ilios or Troia, following the abduction of a Greek queen by the Trojan prince Paris, also known as Alexandros. As the *Times* put it, these tales were "accepted by all mankind as fictions of very nearly the same order

as the romances of Arthur." Needless to say, all this was twelve years before Heinrich Schliemann actually found Troy on a mound overlooking the Dardanelles; before he excavated the palace of Mycenae, homeland of the Greek overlord Agamemnon; before it became clear that both Troy and Mycenae were rich and powerful cities at the same period in the late second millennium BC; before later excavations showed that Troy was destroyed in a great conflagration soon after 1200 BC; before sling stones and other weapons were found on the site, proving that the destruction was caused by an enemy siege; before a clay document was unearthed that turned out to be a treaty between a Hittite king and the land of Wilusa; before the same Wilusa was securely identified as none other than Homer's Ilios; before a ruler of Wilusa whom the treaty calls Alaksandu could thus be related to Homer's Alexandros, prince of Troy; before—in short—Gladstone's feeling that the Iliad was more than just a quilt of groundless myths turned out to have been rather less foolish than his contemporaries imagined.

There is one area, however, where it is difficult to be much kinder to Gladstone today than his contemporaries were at the time: his harping on about Homeric religion. Gladstone's was neither the first nor the last of great minds to be led astray by religious fervor, but in the case of his Studies on Homer, his convictions took the particularly unfortunate turn of trying to marry Homer's pagan pantheon with the Christian creed. Gladstone believed that at the beginning of mankind humanity had been granted a revelation of the true God, and while knowledge of this divine revelation later faded and was perverted by pagan heresies, traces of it could be detected in Greek mythology. He thus left no god unturned in his effort to detect Christian truth in the Homeric pantheon. As the Times put it, Gladstone "strained all his faculties to detect, in the Olympian Courts, the God of Abraham who came from Ur of the Chaldees, and the God of Melchezedek who dwelt in Salem." Gladstone argued, for instance, that the tradition of a Trinity in the Godhead left its traces on the Greek mythology and is manifested in the three-way division of the world between Zeus, Poseidon, and Hades. He claimed that Apollo displays many of the qualities of Christ himself and even went so far as to suggest that Apollo's mother, Leto, "represents the Blessed Virgin." The *Times* was not amused: "Perfectly honest in his intentions, he takes up a theory, and no matter how ridiculous it is in reality, he can make it appear respectable in argument. Too clever by half!"

Gladstone's determination to baptize the ancient Greeks did his Studies on Homer a sterling disservice, since his religious errings and strayings made it all too easy to discount his many other ideas. This was most unfortunate, because when Gladstone was not calculating how many angels could dance on the tip of Achilles' spear, it was exactly his other alleged great failing, that of taking Homer too seriously, that elevated him far above the intellectual horizon of most of his contemporaries. Gladstone did not believe that Homer's story was an accurate depiction of historical events, but unlike his critics he understood that the poems held up a mirror to the knowledge, beliefs, and traditions of the time and were thus a historical source of the highest value, a treasure-house of data for the study of early Greek life and thought, an authority all the more trustworthy because an unconscious authority, addressing not posterity but Homer's own contemporaries. Gladstone's toothcombing analysis of what the poems said and-sometimes even more importantly—what they did not say thus led him to remarkable discoveries about the cultural world of the ancient Greeks. The most striking of these insights concerned Homer's language of color.

For someone used to the doldrums and ditchwater of latter-day academic writing, reading Gladstone's chapter on color comes as rather a shock—that of meeting an extraordinary mind. One is left in awe by the originality, the daring, the razor-sharp analysis, and that breathless feeling that however fast one is trying to run through the argument in one's own mind, Gladstone is always two steps ahead, and, whatever objection one tries to raise, he has preempted several pages before one has even thought of it. It is therefore all the more startling that Gladstone's tour de force comes to such a strange conclusion. To phrase it somewhat anachronistically, he argued that Homer and his contemporaries perceived the world in something closer to black and white than to full Technicolor.

In terms of its sheer implausibility, Gladstone's claim that the Greeks' sense of color differed from ours seems at first sight to come a close

second to his notions of a Christlike Apollo or a Marian Leto. For how could such a basic aspect of human experience have changed? No one would deny, of course, that there is a wide gulf between Homer's world and ours: in the millennia that separate us, empires have risen and fallen, religions and ideologies have come and gone, science and technology have transformed our intellectual horizons and almost every aspect of daily life beyond all recognition. But if in this great sea of change we could pick just one haven of stability, one aspect of life that must have remained exactly the same since Homer's day—even since time immemorial—then it would surely be the pleasure in the rich colors of nature: the blue of sky and sea, the glowing red of dawn, the green of fresh leaves. If there is one phrase that represents a rock of stability in the flux of human experience, then surely it would be that timeless question "Daddy, why is the sky blue?"

Or would it? The mark of an exceptional mind is its ability to question the self-evident, and Gladstone's scrutiny of the Iliad and the Odyssey left no room for doubt that there was something seriously amiss with Homer's descriptions of color. Perhaps the most conspicuous example is the way Homer talked about the color of the sea. Probably the single most famous phrase from the whole Iliad and Odyssey that is still in common currency today is that immortal color epithet, the "winedark sea." But let's consider this description with persnickety Gladstonian literal-mindedness for a moment. As it happens, "wine-dark" is already an act of redemptive interpretation in the translation, for what Homer actually says is oinops, which literally means "wine-looking" (oinos is "wine" and op- is the root "see"). But what does the color of the sea have to do with wine? As an answer to Gladstone's simple question, scholars have suggested all manner of imaginable and unimaginable theories to wave away the difficulty. The most common answer was to suggest that Homer must have been referring to the deep purplecrimson shade, such as a troubled sea has at dawn or sunset. Alas, there is no indication that Homer used the epithet for the sea at dawn or sunset in particular. It has also been suggested, apparently in all earnestness, that the sea can sometimes look red because of certain types of algae. Another scholar, despairing of the possibility of painting the sea

red, tried instead to turn wine blue and claimed that "blue and violet reflects are visible in certain wines of southern regions, and especially in the vinegar from home-made wines."

There is no need to dwell on why all these theories hold neither wine nor water. But there was one other method for circumventing the difficulty, which was applied by many a self-respecting commentator and which does deserve some comment. This was to call upon that foolproof catchall of literary criticism: poetic license. One eminent classicist, for example, pooh-poohed Gladstone by claiming that "if any man should say that the minstrel was deficient in the organ of colour because he designated the sea by this vague word, I would meet him by saying that the critic is deficient in the organ of poetry." But when all is said and sung, the elegant conceit of the critics' animadversions does not bear up to Gladstone's sophisticated literal-mindedness, for his surefooted analysis had all but eliminated the possibility that poetic license could be the explanation for the oddities in Homer's color descriptions. Gladstone was not poetically tone-deaf, and he was well attuned to the artful effect of what he called "straining epithets of colour." But he also understood that if the discrepancies were merely a bold exercise of the poet's art, then the straining should be the exception rather than the rule, for otherwise the result is not license but confusion. And he showed, using methods which would today be considered exemplary applications of systematic textual analysis but which one of his contemporary critics derided as the bean-counting mentality of "a born Chancellor of the Exchequer," that this vagueness in Homer's color descriptions was the rule, not the exception. To prove it, Gladstone drew a circle of evidence consisting of five main points:

- I. The use of the same word to denote colors which, according to us, are essentially different.
- II. The description of the same object under epithets of color fundamentally disagreeing one from the other.
- III. The slight use of color, and its absence in certain cases where we might confidently expect it.

- IV. The vast predominance of the most crude and elemental forms of color, black and white, over every other.
- V. The small size of Homer's color vocabulary.

He then proceeded to support these points with over thirty pages of examples, of which I will quote just a few. Consider first what other objects Homer describes as having the appearance of wine. Except for the sea, the only other thing that Homer calls "wine-looking" is... oxen. And none of the critics' philological somersaults could turn over Gladstone's simple conclusion: "There is no small difficulty in combining these two uses by reference to the idea of a common colour. The sea is blue, gray, or green. Oxen are black, bay, or brown."

Or what is one to make of the flower name "violet" (*ioeis*), which Homer uses as a designation for the color of . . . the sea. (Homer's phrase *ioeidea ponton* is variously translated—according to the translator's muse—as the "violet sea," the "purple ocean," or the "violet-colored deep.") And is it also poetic license that allows Homer to use the same flower to describe the sheep in the cave of the Cyclops as "beautiful and large, with thick violet wool"? Presumably, what Homer was referring to were black sheep as opposed to white ones, and it may be granted that "black sheep" are not really black but actually very dark brown. But violet? Or what about another place in the *Iliad*, where Homer applies the term "violet" to describe iron? And if the violet seas, violet sheep, and violet iron are all to be written off as poetic licenses, then what about a different passage, where Homer compares Odysseus's dark hair to the color of the hyacinth?

Homer's use of the word *chlôros* is no less peculiar. In later stages of Greek, *chlôros* just means "green" (and it is this meaning that has inspired familiar terms in the language of science, such as the pigment chlorophyll and the greenish gas chlorine). But Homer employs the word in a variety of senses that don't seem to suit greenness very comfortably. Most often, *chlôros* appears as a description of faces pale with fear. While this could merely be a metaphor, *chlôros* is also used for fresh twigs and for the olive wood club of the Cyclops. Both twigs and olive

wood would strike us today as brown or gray, but with a bit of goodwill we might still give Homer the benefit of the doubt here. This goodwill is stretched to the limit, however, when Homer uses the same word to describe honey. Hands up, anyone who has ever seen green honey.

But Gladstone's circle of evidence is only just beginning. His second point is that Homer often describes the same object with incompatible color terms. Iron, for instance, is said to be "violet" in one passage, "gray" elsewhere, and in yet another place it is referred to as *aithôn*, a term otherwise used to refer to the color of horses, lions, and oxen.

Gladstone's next point is how remarkably colorless Homer's vibrant verse is. Flick through anthologies of modern poetry, and color stares you in the eye. Is there a self-respecting poet who has not drawn inspiration from "the green fields and from you azure sky"? Whose verse has not celebrated that time of year "when daisies pied and violets blue and lady-smocks all silver white, and cuckoo-buds of yellow hue do paint the meadows with delight"? Goethe wrote that no one can be insensitive to the appeal of the colors that are spread out over the whole of visible nature. But Homer, it appears, was precisely that. Take his descriptions of horses. For us, Gladstone explains, "colour is in horses a thing so prominent that it seems, whenever they are at all individualized, almost to force itself into the description. It is most singular that, though Homer so loved the horse that he is never weary of using him with his whole heart for the purposes of poetry, yet in all his animated and beautiful descriptions of this animal, colour should be so little prominent." Homer's silence on the color of the sky shouts even louder. Here, says Gladstone, "Homer had before him the most perfect example of blue. Yet he never once so describes the sky. His sky is starry, or broad, or great, or iron, or copper; but it is never blue."

It is not as if Homer was uninterested in nature: he is, after all, fabled as an acute observer of the world and admired for his vivid similes with elaborate descriptions of animals and natural phenomena. The marching of the warriors to the place of gathering, for example, is likened to "the tribes of thronging bees that go forth from some hollow rock, ever coming on afresh, and in clusters over the flowers of spring fly in throngs, some here, some there." The groups of soldiers pouring noisily

onto the plain are said to be "as the many tribes of winged fowl, wild geese or cranes or long-necked swans on the Asian mead by the streams of Caystrius, [which] fly this way and that, glorying in their strength of wing, and with loud cries settle ever onwards, and the mead resounds." Homer had an especially keen eye for the play of light, for anything that shimmers, glints, and glitters: "As obliterating fire lights up a vast forest, along the crests of a mountain, and the flare shows far off, so-as [the soldiers] marched—the gleam went dazzling from the magnificent bronze all about through the upper air to the heavens." Since Homer's similes are so rich in the use of all sensible imagery, says Gladstone, we might have expected to find color a frequent and prominent ingredient in them. And yet his poppies may have "their head aslant, laden with seed and with the rain of spring," but there is never so much as a hint of scarlet. His spring flowers may be a multitude in the field, but their color is not revealed. His fields may be "well-grown of wheat" or "new moistened with rain in summer-time," but their hue is not divulged. His hills may be "woody" and his woods may be "thick" or "dark" or "shady," but they are not green.

Gladstone's fourth point is the vast predominance of the "most crude and elemental forms of color"—black and white—over every other. He counts that Homer uses the adjective *melas* (black) about 170 times in the poems, and this does not even include instances of the corresponding verb "to grow black," as when the sea is described as "blackening beneath the ripple of the West Wind that is newly risen." Words meaning "white" appear around 100 times. In contrast to this abundance, the word *eruthros* (red) appears thirteen times, *xanthos* (yellow) is hardly found ten times, *ioeis* (violet) six times, and other colors even less often.

Finally, Gladstone rummages through the Homeric poems in search of what is not there and discovers that even some of the elementary primary colors, which, as he puts it, "have been determined for us by Nature," make no appearance at all. Most striking is the lack of any word that could be taken to mean "blue." The word *kuaneos*, which in later stages of Greek meant blue, does make an appearance in the poems, but it must have just meant "dark" for Homer, because he uses it

for neither the sky nor the sea, only to describe the eyebrows of Zeus, the hair of Hector, or a dark cloud. Green is hardly mentioned either, for the word *chlôros* is used mostly for non-green things, and yet there is no other word in the poems that can be supposed to represent this commonest of colors. And there doesn't seem to be anything equivalent to our orange or pink in Homer's entire color palette.

When Gladstone finishes drawing his circle of evidence, any reader with at least half an open mind would have to accept that something far more serious is afoot here than merely a few indulgences in poetic license. There is no escaping the conclusion that Homer's relation to color is seriously askew: he may often talk about light and brightness, but seldom does he venture beyond gray scale into the splendor of the prism. In those instances when colors are mentioned, they are often vague and highly inconsistent: his sea is wine-colored, and when not wine-colored, it is violet, just like his sheep. His honey is green and his southern sky is anything but blue.

According to later legend, Homer, like any bard worth his salt, was supposed to have been blind. But Gladstone gives this story short shrift. Homer's descriptions-in everything except color-are so vivid that they could never have been conceived by a man who couldn't see the world for himself. What is more, Gladstone proves that the oddities in the Iliad and the Odyssey could not have stemmed from any problems that were peculiar to Homer the individual. To start with, if Homer's condition was an exception among his contemporaries, surely his defective descriptions would have grated on their ears and would have been corrected. Not only is this not the case, but it seems that traces of the very same oddities still abounded among the ancient Greeks even centuries later. "Violet-colored hair," for example, was used as a description in Pindar's poems in the fifth century BC. Gladstone shows in fact that the color descriptions of later Greek authors, even if not quite as deficient as Homer's, "continued to be both faint and indefinite, in a degree which would now be deemed very surprising." So whatever was wrong with Homer must have afflicted his contemporaries and even some later generations. How can all this be explained?

Gladstone's solution to this conundrum was an idea so radical and so strange that he himself seriously doubted whether he should dare to include it in his book. As he reminisced twenty years later, he eventually published it "only after submitting the facts to some very competent judges. For the case appeared to open up questions of great interest, with respect to the general structure of the human organs, and to the laws of hereditary growth." What makes his proposal even more astonishing is the fact that he had never heard of color blindness. Although, as we shall see, this condition would become famous soon enough, in 1858 color blindness was unknown among the general public, and even those few specialists who were aware of it hardly understood it. And yet, without using the term itself, what Gladstone was proposing was nothing less than universal color blindness among the ancient Greeks.

The sensitivity to differences in color, he suggested, is an ability that evolved fully only in more recent history. As he put it, "the organ of colour and its impressions were but partially developed among the Greeks of the heroic age." Homer's contemporaries, Gladstone said, saw the world primarily through the opposition between light and darkness, with the colors of the rainbow appearing to them merely as indeterminate modes between the two extremes of black and white. Or, to be more accurate, they saw the world in black and white with a dash of red, for Gladstone conceded that the color sense was beginning to develop in Homer's time and had come to include red hues. This could be deduced from the fact that Homer's limited color vocabulary is heavily slanted toward red and that his main "red" word, *eruthros*, is rather untypically used *only* for red things, such as blood, wine, or copper.

The undeveloped state of color perception, Gladstone argues, can immediately explain why Homer had such lively and poetic conceptions of light and darkness while being so tight-lipped on prismatic colors. What is more, Homer's seemingly erratic color epithets will now "fall into their places, and we shall find that the Poet used them, from his own standing-ground, with great vigour and effect." For if Homer's

"violet" or "wine-looking" are to be understood as describing not particular hues but only particular shades of darkness, then designations such as "violet sheep" or "wine-looking sea" no longer seem so strange. Likewise, Homer's "green honey" becomes far more appetizing if we assume that what caught his eye was a particular kind of lightness rather than a particular prismatic color. In terms of etymology, *chlôros* derives from a word meaning "young herbage," which is typically fresh light green. But if the hue distinction between green, yellow, and light brown was of little consequence in Homer's time, then the prime association of *chlôros* would have been not the greenness of the young herbage but rather its paleness and freshness. And as such, Gladstone concludes, it makes perfect sense to use *chlôros* to describe (yellow) honey or (brown) freshly picked twigs.

Gladstone is well aware of the utter weirdness of the idea he is proposing, so he tries to make it more palatable by evoking an evolutionary explanation for how sensitivity to colors could have increased over the generations. The perception of color, he says, seems natural to us only because mankind as a whole has undergone a progressive "education of the eye" over the last millennia: "the perceptions so easy and familiar to us are the results of a slow traditionary growth in knowledge and in the training of the human organ, which commenced long before we took our place in the succession of mankind." The eye's ability to perceive and appreciate differences in color, he suggests, can improve with practice, and these acquired improvements are then passed on to the offspring. The next generation is thus born with a heightened sensitivity to color, which can be improved even further with continued practice. These subsequent improvements are bequeathed to the next generation, and so on.

But why, one may well ask, should this progressive refinement of color vision not have started much earlier than the Homeric period? Why did this process have to wait so long to get going, given that from time immemorial all things bright and beautiful have been blazing us in the eye? Gladstone's answer is a masterstroke of ingenuity, but one that seems almost as bizarre as the state of affairs it purports to account for. His theory was that color—in abstraction from the object that is

colored—may start mattering to people only once they become exposed to artificial paints and dyes. The appreciation of color as a property independent of a particular material may thus have developed only hand in hand with the capacity to manipulate colors artificially. And that capacity, he notes, barely existed in Homer's day: the art of dyeing was only in its infancy, cultivation of flowers was not practiced, and almost all the brightly colored objects that we take for granted were entirely absent.

This dearth of artificial colors is particularly striking in the case of blue. Of course, the Mediterranean sky was just as sapphire in Homer's day, and the Côte just as azure. But whereas our eyes are saturated with all kinds of tangible objects that are blue, in all imaginable shades from the palest ice blue to the deepest navy, people in Homer's day may have gone through life without ever setting their eyes on a single blue object. Blue eyes, Gladstone explains, were in short supply, blue dyes, which are very difficult to manufacture, were practically unknown, natural flowers that are truly blue are also rare.

Merely to be exposed to the haphazard colors of nature, Gladstone concludes, may not be enough to set off the progressive training of color vision. For this process to get going, the eye needs to be exposed to a methodically graded range of hues and shades. As he puts it, "The eye may require a familiarity with an ordered system of colours, as the condition of its being able closely to appreciate anyone among them." With so little experience in manipulating and controlling colors artificially and so little reason to dwell on the color of materials as an independent property, the progressive improvement in the perception of color would thus have barely started in Homer's time. "The organ was given to Homer only in its infancy, which is now full-grown in us. So full-grown is it, that a child of three years in our nurseries knows, that is to say sees, more of colour than the man who founded for the race the sublime office of the poet."

What are we to make of Gladstone's theory? The verdict of his contemporaries was unequivocal: his claims were almost universally scoffed at as the fantasies of overzealous literal-mindedness, and the oddities he had uncovered were unceremoniously brushed away as poetic license,

or as proof of the legend of Homer's blindness, or both. With the benefit of hindsight, however, the verdict is less black and white. On one level, Gladstone was so accurate and farsighted that it would be inadequate to class him as merely ahead of his time. Fairer would be to say that his analysis was so brilliant that substantial parts of it can stand almost without emendation as a summary of the state of the art today, 150 years later. But on another level, Gladstone was completely off course. He made one cardinal error in his presuppositions about the relation between language and perception, but in this he was far from alone. Indeed, philologists, anthropologists, and even natural scientists would need decades to free themselves from this error: underestimating the power of culture.