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Article Title: Animal Cunning: Deceptive Nature and Truthful Science in Charles Kingsley's Natural Theology.

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Can nature lie? This question weighed upon the parson-naturalist Charles Kingsley in 1857 as he read with horror a new book by his friend Philip Henry Gosse. Omphalos argued that the Earth's record of changing species was an illusion caused by fossils and strata appearing readymade in the beginning. "Each organism," Gosse wrote, "was from the first marked with the records of a previous being. But since creation and previous history are inconsistent with each other . . . it follows, that such records are false" (336). Kingsley had earlier praised and emulated Gosse's work, which framed nature studies as a form of religious worship. Omphalos, however, dismayed Kingsley. "For twenty-five years," he wrote,

I have read no book which has so staggered and puzzled me. . . . Your book tends to prove this--that if we

accept the fact of absolute creation, God becomes a Deus quidam deceptor. . . . [Y]ou make God tell a lie. It is not my reason, but my conscience which revolts here; which makes me say, "Come what will, disbelieve what I may, I cannot believe this of a God of truth, of Him who is Light and no darkness at all, of Him who formed the intellectual man after His own image, that he might understand and glory in His Father's works." . . . I cannot . . . believe that God has written on the rocks one enormous and superfluous lie for all mankind (280-81).

Kingsley's protest reflected his view that nature was true in an empirical sense, following fixed, observable laws; and also in a moral sense, sincerely conveying God's values and teaching humans to be equally sincere. At stake for Kingsley in this argument was humankind's relationship with a personal God. As a member of the Broad Church movement seeking to avoid doctrinal factionalism, he emphasized God's moral character, which worshippers came to know through both scripture and the world. Believing every text or creation carried traces of its maker, Kingsley concluded nature must, like the Bible, embody divine virtues, the highest of which for him was truthfulness.

Kingsley's insistence that nature testified to God's love of truth reflected his idiosyncratic obsession with truthfulness. Yet it was also symptomatic of wider

interactional dynamics between Victorian science and religion. Kingsley is often name-checked in refutation of simplistic models of science and religion, or science and the humanities, as separate, irreconcilable bodies of thought. Supporting Charles Darwin's theories of evolution and preaching the value of science in alliance with secularists such as Thomas Henry Huxley, Kingsley seems to exemplify the potential for collaboration between science and religion, and science and the humanities (the supposed "two cultures").¹ However, Anne DeWitt has recently cautioned against rhetoric of "one culture," claiming it downplays the complex struggles for authority between different groups and methods.² Kingsley's insistence on nature's divine truthfulness illustrates how common ground could also be disputed territory. This argument, which he developed through the course of his career, sought to protect the Church's interpretive authority over nature from being usurped or invalidated by secular science. From the mid-century onwards, as physical nature, and theology and ethics increasingly diverged into separate kinds of knowledge, Kingsley's rhetoric of unitary truth struggled to hold them together. For Kingsley, the facts of life had to embody moral truths equally as the Bible's moral teachings had to be grounded in facts, however qualified and uncertain this morality and factuality might be. Such natural theology interlocked with a nationalist ideology of British honesty and

moderation, which Kingsley imagined as embodied in his liberal Anglicanism.

Kingsley's model of nature as a paragon and preacher of veracity was undermined, however, by growing evidence that many species survived by parasitism and ruthless deception. Jacques Derrida noted a long-running tendency in western philosophy to construct lying as one of the fundamental barriers between humans and animals (129-36). However, Kingsley was concerned less with animals' mental capacities than with their symbolic function. Why would a truth-loving God create animal camouflage and disguises? John Hawley argues that while Kingsley always publically insisted on nature's divine legibility, privately, in his later years, he "increasingly turned to the 'book' of nature as one might view a Rorschach blot: as a suggestive invitation to discern meaning" (479). Nonetheless, Kingsley never gave up the search for moral meaning in nature, since its presumed existence was fundamental to his authority as a parson-naturalist, devoted to interpreting nature and scripture side by side. He sometimes downplayed nature's deceptions by moralizing the practices of science, imagined as a providential expression of divine truthfulness. However, this strategy framed nature per se as contrastingly amoral. After Kingsley's death, scientific naturalists would follow this point to its conclusion, representing ethics not as natural or transcendent but as artificial and, perhaps, relative. Resisting these

implications, Kingsley inconsistently clung onto the idea of innate moral symbolism in nature, however cryptic. In his vision, moral truth vacillated between being an objective natural fact and a human projection.

Natural Truthfulness

Kingsley's belief in nature's truthfulness followed from his fixation with sincerity. Protestant tradition had idealized sincerity as a virtue which collapsed the distinction between inner conscience and outward speech.³ To be true, in the sincere sense, was to be not merely honorable, reliable or correct, but also to be transparent. Kingsley often failed to embody this ideal, hiding his private spiritual struggles behind a bullish public voice. Yet the ideal remained central to his thought. As an upper-class, Cambridge-educated rector, he sacrificed promotion to speak out in favour of controversial causes such as Christian Socialism. "I will not be a liar," he wrote to his wife Fanny in 1848 when encouraged to distance himself from the movement: "I will speak in season and out of season. I will not shun to declare the whole counsel of God" (1:178). In 1856, he wrote to Gosse of his loathing for Catholicism's "outward observances, and mere stage-acting in the house of God" (1:413). His public dispute with John Henry Newman in the

1860s stemmed from Kingsley's contention that the Catholic author had encouraged priests to lie. His reverence for truth sometimes even made him regret writing fiction, deriding the activity as "a farce and a sham."⁴ The novelist was perhaps not so different from the animal imposter, clothed in false colors. Kingsley imagined God as the origin of veracity, exemplifying it to humankind in his words and works. In an early lecture "On English Composition" (1848), he claimed that God intended language to serve not the concealment but "the expression of thought." All literature expressed "the character of the writer's mind and heart," Kingsley argued, since, "Expression is literally the pressing out into palpable form that which is already within us" (230-31). Kingsley would transpose this notion of the text as a materialization of its author's mind onto nature.

A keen naturalist from his youth, Kingsley had grown up with the traditional idea that nature was a "book" of moral symbols, from the cunning fox to the industrious bee.⁵ William Kirby's Bridgewater Treatise (1835) had reasserted nature's divine textuality, declaring "The Works of God and the Word of God may be called the two doors which open into the temple of Truth . . . as both proceed from the same Almighty and Omniscient Author" (1:xvii). In 1842, as a young curate, Kingsley echoed this rhetoric in a letter to his future wife Fanny: "Do not study matter for its own sake, but as the countenance of God! . . . Study the sky! Study water! Study

trees! . . . Study all these . . . as allegories and examples from whence moral reflections may be drawn" (1:88). From his earliest sermons, Kingsley described nature as God's sincere self-expression. "I can trust God's world to bear better witness than I can, of the Loving Father who made it," he told his parishioners in 1846: "I thank him from my own experience for the testimony of His Creation, only next to the testimony of His Bible" ("Natural History" 304). Nature not only preached truth, in Kingsley's formulation, but also exemplified it. His idealizations cohere with a philosophical tradition which Anthony Pilkington has traced back to the Earl of Shaftesbury and Jean-Jacques Rousseau, framing nature as transparently truthful in contrast to human mendacity (61-62). Nor was Kingsley alone among mid-Victorians in continuing this tradition. The preacher George Dawson, whom Kingsley dubbed "the greatest talker in England" (qtd. in Dale 90), argued that nature's products offered a moral exemplum through their transparency:

I look at Nature, then, and it becomes to me a preacher. I watch all its details and I find written upon every one--truthfulness. . . . The body tells of the soul and the soul of the body . . . [E]very form is made up of particles, each of which bears the true form of the whole. . . . There is no show, no "appearance," no "getting up," as there is in many of our lives. . . .

Nature never does lie. It is only man that lies; and in proportion as man lies, he departs from Nature (414, 419-23).

Animal bodies might be imagined as similarly transparent, as Kingsley's friend John Ruskin showed when contrasting them with "deceptive" modern architecture. "That building will generally be the noblest," he wrote, "which to an intelligent eye discovers the great secrets of its structure, as an animal form does, although from a careless observer they may be concealed" (80). Nature seemed to parallel the Bible as the source and standard of truthfulness.

However, such rhetoric masked long-growing uncertainty of nature's capacity to convey moral truths. While science had discovered natural laws that were empirically verifiable, their possible symbolic meanings were, like those of the Bible, open to interpretation. Deism had shown how ambiguous nature could be when read independently of scripture. Thomas Paine implied nature favored republican democracy and rejected artificial aristocracy (21). Conversely, David Hume noted that, if nature did proclaim a creator, its gratuitous violence and suffering hardly suggested a moral one (133-34). Such dangerous deism and scepticism caused evangelicals to stress the primacy of scripture and the moral inscrutability of nature.⁷ These problems had prompted the influential natural theologian William Paley to emphasize practical evidence of

design over less certain moral symbolism. Paley concluded that nature testified to a creator through its ingenious adaptations, which maximized happiness. Kingsley was immersed in Paley's work as an undergraduate and described him, in later years, as one of the "greatest natural theologians" ("Future" 315). However, Paley's utilitarian effort to calculate the world's goodness undermined the claim that it taught goodness. As naturalists followed Paley's lead, studying organisms' adaptations to their environments, examples multiplied of creatures surviving through not superior strength or skills but deceptive camouflage and parasitism.⁵ Gosse commented: "A very vast amount of the energy of animal life is spent either in making war, or in resisting or evading it. . . . [V]arious are the arts and devices, the tricks and stratagems . . . employed in that earnest strife which never knows a suspension of hostilities" (Evenings 407). As evidence mounted for species extinction, nature seemed not only to reward deceit but to consign the honest to oblivion. These influences suffused mid-century English nature writing with a profound ambivalence about the moral significance of its objects. Scholars have debated the gradual shift in nature writing of this time from a "narrative of natural theology" to a "narrative of natural history," which avoided theological questions.⁸ If Nature spoke, it perhaps spoke only of its own internal workings.

Kingsley would downplay this designification of nature by moralizing and spiritualizing the practices of science, framing them as providential developments that showed God's love of truth. This logic resembled the Cambridge geologist Adam Sedgwick's claim in his Discourse on the Studies of the University (1833) that, despite seeming to undermine scripture, science actually confirmed it. Inductive research, he argued, embodied the Christian values of humility, patience and self-abnegation in the search for truth.⁹ In his book of seaside studies Glaucus: Wonders of the Shore (1854-5), Kingsley praised Sedgwick for having thus "wielded in defence of Christianity the very science . . . expected to subvert it" (14). However, this moralizing and spiritualizing of scientific habits rendered the textuality of nature uncertain. In 1845, Sedgwick argued that nature's consistent laws embodied the divine virtue of truthfulness, since moral and material "nature" came from "one creative mind" (56). Yet Sedgwick also stressed the separateness of the moral and material. Fearing evolutionary theory would reduce morality to an outgrowth of the physical, he argued that the human intellect "ennobled" material nature, projecting moral analogies onto matter that remained, in itself, amoral (56). Although Kingsley would disagree with Sedgwick on evolution, he echoed the geologist's ambivalence about the moral legibility of nature. In Glaucus and his evolutionary fairy tale The Water Babies (1862-63), he presented science and

technology as providential realizations of divine truthfulness, which humankind imposed upon nature rather than discovering it there. However, these texts also clung onto the notion that nature possessed some moral significance in itself, preaching honesty, diligence and cooperation, and condemning liars and parasites through physical degeneration. Later in his career, Kingsley seemed, superficially, to accept the division of moral and material truth, distinguishing science and theology by their respective concerns for "the How" and "the Why." Yet this division also served to maintain the overlap between material and moral, presenting them as opposite ends of a spectrum instead of fundamentally separate. Kingsley's insistence that nature had a "Why" protected the authority of parson-naturalists like him to interpret it as a text of divine moral symbols. Kingsley often conjured the concept of Deus quidam deceptor (God who is sometimes a deceiver) in order to forcefully deny it. Yet his real struggle was less against the spectre of a deceitful creator than the idea that lying as a moral concept had no saliency in nature.

Unnatural Theology

Kingsley first made his name as a parson-naturalist with Glaucus, which he published as an article then expanded into a

book. Following controversies around Darwin's On the Origin of Species (1859), Kingsley tried to reconcile evolution with religion in The Water-Babies, and continued to lecture on natural history until his death in 1875. Glaucus reveals his first uncertainties about nature's supposed truthfulness, as he observes organisms surviving through tricks and parasitism. Hence, the text frequently locates divine truthfulness in the habits of naturalists, conceptualizing the world as a kind of trial which humans overcome through scientific honesty and objectivity. Kingsley imagines this process further in The Water-Babies, suggesting that, through science, humans are destined not only to transcend nature's deceits but also to remove them, imposing truthfulness on nature.

The rhetoric of Glaucus often presents nature as morally significant and improving. "How easily a man might, if he would, wash his soul clean," Kingsley writes, "by going out to be alone a while with God in heaven, and with that earth which He has given to the children of men . . . as a witness and a sacrament that in Him they live and move" (221-22). Nature seems to reveal its creator just as Kingsley imagined books expressing the character of their authors. The beaches and rock pools, he writes, display "the finger-mark of God" (16). Amy King notes that the popular genre of seaside-study book followed the novelistic logic of discovering general truths by scrutinizing tiny particulars (159-62). Kingsley frames his narrative in this way, instructing the reader "to see grandeur

in the minutest objects . . . estimating each thing not carnally . . . by its size or its pleasantness to the senses, but spiritually, by the amount of Divine thought revealed to him therein" (45). Hamlin observes that Kingsley perceived a divine moral in crabs tidying the sea floor so, exemplifying duty and social responsibility ("Green" 269). "All the invaluable laws and methods of sanitary reform," Kingsley writes, "at best are but clumsy imitations of the unseen wonders which every animalcule and leaf have been working since the world's foundation; with this slight difference between them and us, that they fulfil their appointed task, and we do not." Nature appears a righteous foil to "the carelessness, and laziness, and greed of sinful man," preaching morals to humans wise enough to listen. Kingsley continues, "The sickly geranium which spreads its blanched leaves against the cellar panes . . . had it a voice, could tell more truly than ever a doctor in the town, why little Bessy sickened of the scarlatina, and little Johnny of the hooping-cough" (174-75). The crab's scavenging offers a morality play, as the narrator states: "The evil was there,-- and there it should not stay; so having neither cart nor barrow, he just began putting it into his stomach, and in the meanwhile set his assistants to work likewise" (179). If nature speaks, it is through actions, not words. Nevertheless, Kingsley seems to read its messages as clearly as those in the Bible.

Such moral symbolism was countered, however, by displays of apparent wanton violence and deceit. In 1856, Kingsley wrote to his friend F. D. Maurice of his disappointment in nature studies:

I have long ago found out how little I can discover about God's absolute love, or absolute righteousness, from a universe in which everything is eternally eating everything else--infinite cunning and shift (in the good sense), infinite creative fancy it does reveal; but nothing else, unless interpreted by moral laws which are in oneself already, and in which one has often to trust against all appearances, and cry out of the lowest deep (as I have had to do) . . . Art thou a "Deus quidam Deceptor," after all?--No. there is something in me--which is not nature, but Thou must have taught me . . . I know that my Redeemer . . . will justify me, and make me right, and deliver me out of the grasp of nature . . . But beetles and zoophytes never whispered that to me. . . . [Nature] can teach no moral theology. It may unteach it, if the roots of moral theology be not already healthy and deep in the mind. I hinted that in "Glaucus" (1:486).

Kingsley's qualification of the phrase "cunning and shift" betrays his anxiety that nature might show creative ingenuity, but not a truth-loving God. Glaucus often implies this point

by discovering God's "love" in animals' adaptations to their environments. The whelk "burrows in the sand in chase of hapless bivalve shells, whom he bores through with his sharp tongue (always, cunning fellow, close to the hinge, where the fish is), and then sucks out their life" (75). The whelk's amoral "cunning" testifies merely to its practical adaptation to its surroundings. Kingsley similarly avoids moral symbolism when discussing the parasitic sea anemone which rides on a crab's back, stealing its food. The only lesson Kingsley draws here is that "kind Nature" always provides, fitting the anemone "with a stout leather coat" to shield it when the blundering crab collides with rocks (76). The rhetoric of moral symbolism gives way to literal utility in the struggle for survival.

Kingsley's anthropomorphic descriptions of sea life paradoxically accentuate nature's amorality. Depicting prey as pitiable victims and predators as devious villains, he highlights nature's injustice as crimes go unpunished. In one memorable passage, the reader is encouraged to empathize with a fish lethally duped by a camouflaged sea worm. Kingsley's description hovers between the perspectives of naturalist and fish as the worm

hangs, helpless and motionless . . . it may be a dead strip of sea-weed, Himanthalia lorea, perhaps, or Chorda filum; or even a tarred string. So thinks the little fish

who plays over and over it, till he touches at last what is too surely a head. In an instant a bell-shaped sucker mouth has fastened to his side. In another instant, from one lip, a concave double proboscis . . . has clasped him like a finger; and now begins the struggle: but in vain (137).

The Gothic horror continues as the fish descends into a "cave of doom" (the worm's stomach). The "black murderer" curls up to digest its kill, "motionless and blest" (138), the latter adjective showing Kingsley's effort to preserve some sense of morality. He retreats to Paley's view of nature as a system that maximizes happiness, unable to read any abstract ethics in such phenomena. "This planet was not made for man alone," Kingsley reflects, "and if there were . . . final moral causes for their existence, the only ones which we have a right to imagine are these--that all, down to the lowest Rhizopod, might delight themselves, however dimly, in existing; and that the Lord might delight Himself in them" (88-89). Even this claim seems overly optimistic, though, in light of nature's cruel tricks and destruction. Kingsley characterizes life underwater by

wild flux and confusion, the mad struggles, the despairing cries of the world of spirits which man has defiled by sin, which would at moments crush the

naturalist's heart, and make his brain swim with terror, were it not that he can see by faith, through all the abysses and the ages, not merely "Hands, From out the darkness, shaping man;" but above them a living loving countenance, human and yet Divine (125).

Nature might be empirically "truthful" in so far as its facts were consistent. However, as a model or allegory of moral truthfulness, it often failed to deliver.

Faced with this designification of nature, Kingsley salvaged some moral meaning by focusing on the habits of the naturalist. God revealed his love of truth, Kingsley sometimes suggested, less through nature itself than through the providential rise of science, which developed humans' truthfulness. Glaucus depicts the naturalist as above the physical world through his bodily self-control. "For his moral character," Kingsley declares, "he must, like a knight of old . . . [be] brave and enterprising . . . [free] from haste and laziness, from melancholy, testiness, pride, and all the passions which make men see only what they wish to see" (44-45). Kingsley conflates science's search for factual truths with Christian self-abnegation: both involve transcending the mortal body, subjective feelings and animal urges. His sentiments conform to a broad, emerging linkage in the period between objectivity and Christian rejection of bodily self.⁸ In 1854, John Tyndall claimed the scientific practitioner's

transcendence of personal feelings and bias rendered him "a heroic, if not indeed an angelic, character" (344). At the same time, phrenology (which greatly interested Kingsley) framed moral improvement as a movement away from "animal" tendencies. As the phrenologist George Combe wrote, "Man has received animal propensities and moral sentiments," the latter separating him from animals (364). Like muscles, morals could be imagined as strengthening with use, and Kingsley frequently advocated science as an exercise to this end. He wrote that the naturalist's habits "of general patience, diligence, accuracy, reverence for facts for their own sake . . . are not merely intellectual, but also moral habits, which will stand men in practical good stead in every affair of life" ("Soldiers" 186). While nature might often be deceitful, studying it formed part of humankind's elevation towards godly truthfulness.

Kingsley frames aesthetically and morally revolting phenomena as moral trials that help naturalists to transcend their bodily subjectivity. The shore's "mass of life," he writes, "is somewhat ugly, perhaps, at first sight," strewn with "huge dirty bivalve shells, as large as the hand, each with its loathly grey and black siphons hanging out, a confused mass of slimy death" (62). The naturalist must learn to bear such unpleasantness, however, to appreciate the more abstract beauty of nature's system. In this sense, Kingsley equivocates over whether nature is truly amoral or merely

seems so due to humans' fallen state. Camouflage is perhaps an invitation to scrutiny, as Kingsley states of the sea worm:

there are animals in which results so strange, fantastic, even seemingly horrible, are produced, that fallen man may be pardoned, if he shrinks from them in disgust. That, at least, must be a consequence of our own wrong state; for everything is beautiful and perfect in its place. . . . Whether we are intruding or not in turning this stone, we must pay a fine for having done so, for there lies an animal as foul and monstrous to the eye as "hydra, gorgon, or chimera dire," and yet so wondrously fitted to its work that we must needs endure, for our own instruction, to handle and to look at it (136).

It is not nature that Kingsley describes as "fallen" but humans, whose mortal state distorts their view. Glaucus echoes the sentiment of the Proverbs which offered early Victorians a useful explanation for nature's visual tricks: "It is the glory of God to conceal a thing: but the honour of kings is to search out a matter".¹¹ Fallen humans might be said to occupy a world of unreliable appearances, but to develop the divine truthfulness in themselves by seeking beneath these appearances. This redemptive, internal process diverts attention from the brutal function of such tricks in nature's economy.

Glaucus's rambling narrative form reinforces the focus on the naturalist-narrator scrutinizing his perceptions, and, in the process, abstracting from nature, viewing it from a higher, more spiritual altitude. As in Gosse's popular books, the narrative begins not with systematic taxonomies but subjective impressions, which the truth-seeker must carefully filter and interrogate. Approaching a bed of shells washed up on the beach, the narrator exclaims:

What a variety of forms and colours are there, amid the purple and olive wreaths of wrack. What are they all? What are the long white razors? . . . What the tufts of delicate yellow plants like squirrels' tails, and lobsters' horns[?] . . . What those tiny babies' heads, covered with grey prickles instead of hair? . . . [W]hat are the red capsicums? and why are they . . . rattling about the huge mahogany cockles, as big as a child's two fists, out of which they are protruded? (63-64)

Structuring his description as a series of questions and visual metaphors, Kingsley foregrounds problems of perception and perspective. These creatures are, of course, neither razors, squirrels' tails, nor human body parts; but our minds process these unfamiliar objects through comparisons, which can mislead. Kingsley urges his readers to gather corallines on the beach, "and think long over them before you determine whether the oat-like stems and spongy roots belong to an

animal, or a vegetable. Animals they are, nevertheless, though even now you will hardly guess the fact, when you see at the mouth of each tube a little scarlet flower" (169). Through Kingsley's narration, the reader vicariously experiences the confusion of the naturalist duped by one organism's resemblance to another. He asks: "What is that little brown thing whom you have just taken off the rock to which it adhered so stoutly by his sucking-foot? A limpet? Not at all: he is of quite a different family and structure." The sea-snail serves as an object lesson, Kingsley explains, "of the way in which a scientific knowledge of objects must not obey, but run counter to, the impressions of sense" (128-29). Although nature's deceptions would seem to render it morally meaningless, Kingsley rationalizes them as spurs to humans' innate will to truth, inviting us to dispel the tricks and confusions with science. While animals might deceive each other, God seems to express his love of truth through the providential rise of science, which raises humans above such deceit.

Kingsley extends this moralization of science further in The Water-Babies, suggesting that humans are destined to remodel nature, rendering it more truthful. Mastering nature technologically, humans are able to remove or ameliorate its cruel deceptions. Nature comes to resemble a physical and moral work-in-progress which God intends humans to perfect. Further, in the process of this work, they perfect their own inner

natures. The protagonist Tom begins life as a devious, blackened chimneysweep, but eventually develops into an honest "great man of science" who "can plan railroads, and steam-engines, and electric telegraphs, and rifled guns" (260). Tom realizes this destiny after he is transformed into a magical "water baby" that repairs marine environments and safeguards their inhabitants. Victorian aquarium-keepers were often depicted as moral managers, preventing fights between sea creatures and obviating predation by feeding them.¹² Tom acts similarly, protecting prey and foiling predators' deadly deceptions. He warns salmon of a "wicked otter" lying in wait for them, and tries to protect them from poachers who lure the fish to the surface with bright lights (140). Kingsley was no vegetarian and accepted the necessity of predation in nature's economy, but his vision suggests predation might at least be made more honest, much as fox-hunters justified their blood sport as a fair contest between noble opponents (Griffin 144-46). Kingsley implies that humans are destined to domesticate nature into a cleaner, more transparent form, emphasized by persistent imagery of purification. The tale's claim that, "people's souls make their bodies," and not vice-versa, presents virtues as supernatural, elevating them above brute nature (171). Divine truthfulness seems to be located not in material nature but in humans' efforts to rise above and improve it.

The discourse of natural amorality was intensified by Darwin's observations of insects evolving to blend in with their habitats, becoming imperceptible to prey and predators (Origin 84). At the same time, Henry Walter Bates' theory of protective mimicry argued that many insects evolved to trick their enemies by resembling other, inedible species. In April 1863, a month after Macmillan's Magazine published the last instalment of The Water Babies, Kingsley praised Bates' "Mocking butterflies" as evidence of God's design. Kingsley told Bates that such mimicry "looks most like an immensely long chapter of accidents, and is really, if true, a chapter of special Providences of Him without whom not a sparrow falls to the ground" (2:173-75). Yet Kingsley's utilitarian rhetoric of design elided the damage such mimicry did to the credibility of natural moral symbolism. As Darwin observed, "Nature condescended to the tricks of the stage" ("Contributions" 220-21). Truthfulness would seem to have no meaning in the beasts' struggle for life.

Amoral Facts and Moral Laws

Locating divine truth in the study of nature instead of its phenomena was problematic for Kingsley's natural theology, as it tended to separate factual truth from moral truth. Such a separation would split science and ethics (along with religion) into what Stephen Jay Gould called "non-overlapping

magisteria," exemplified in Huxley and Tyndall's agnosticism. As Baden Powell wrote in 1860, science answered to "matters of external fact" and religion to matters "internal, moral, and spiritual." Theologians and men of science confused questions of "right or wrong" with "truth or error," Powell concluded, through being "forgetful of their own professions" (97, 100). His comments reflected the growing divergence of clergyman and man of science into separate professional identities produced and trained by different institutions.¹³ Kingsley's interpretive authority was also challenged by secular evolutionary ethics, which, like deism before it, claimed to find moral laws in nature which replaced those of the Bible. For these reasons, Kingsley continued to seek moral-religious symbolism in nature per se as well as indirectly through science's mastery of nature. His letter to Bates shows him defending his authority as a natural theologian to interpret nature, alongside the secular naturalist's empirical studies. Having proposed an alternative mechanism of insect mimicry, Kingsley yielded to Bates' rebuttal, stating: 'I honestly bow to your superior knowledge'. However, Kingsley was also quick to circumscribe this knowledge, explaining:

I have been trying to bring my little logic and metaphysic to bear--not on physical science herself, for she stands on her own ground, microscope in hand, and will allow no intruder, however venerable; but on the

nomenclature of physical science, which is to me painfully confused, from a want in our scientific men of that logical training by which things are rightly named, though they cannot be discovered thereby (2:174).

Kingsley argues that, although physical science discovers "laws" of nature, these laws are external to its material facts, "the result of a strictly immaterial and spiritual agency" (2:175). While men of science rule over the facts that make up nature's laws, Kingsley implies theologians have the authority to interpret these laws, discovering meanings in them as in a text. Kingsley would build on this claim from The Water Babies onwards, arguing for traces of moral symbolism (particularly promoting truthfulness) in nature's abstract laws.

Kingsley frequently staked his claim for natural moral symbolism in the supposed laws of degeneration. Equating degeneration with immorality, he depicted dishonest behavior as correlative to a low, degraded physical state.¹⁴ The Water-Babies portrays this dynamic through Tom's physical evolution, which symbolizes his moral changes. At the beginning, Kingsley repeatedly associates Tom with hiding and concealment. As a dirty chimney-sweep, his coating of black soot camouflages him in urban environments, much like Darwin's insects. He throws stones at passing horses while ducking behind a wall (6). When he identifies a rich potential client on one such horse, Tom

cunningly hides the missile he was about to throw (7). His master, Grimes, is similarly associated with deceit and concealment, examining clients' grounds for poaching opportunities and hiding rabbits in his soot-bag. Kingsley associates this dishonesty with primitive animality. When Tom flees after being mistaken for a thief, the narrator associates his deviousness with wildness: "Now, Tom was a cunning little fellow--as cunning as an old Exmoor stag . . . He knew as well as a stag, that if he backed he might throw the hounds out" (28-29). As a water baby, Tom at first torments aquatic creatures with tricks, putting stones in their mouths. The narrator laments these actions, spurning the excuse that they are natural to boys, for "if they have naughty, low, mischievous tricks in their nature, as monkeys have, that is no reason why they should give way to those tricks like monkeys, who know no better" (72). Kingsley frames evolutionary regression as the embodiment of divine moral judgment, crystallized in the tale of the Doasyoulikes, who degenerate into apes through their parasitic laziness and egoism. The dishonest and selfish become trapped by their vices, unable to live without them, much as Bates' insect mimicry protected weak, defenceless species which could only survive through masquerade.

Kingsley further emphasizes the moral symbolism of evolutionary laws (in his teleological reading of them) by personifying them in the matriarch Mrs. Bedonebyasyoudid. This

figure of Mother Nature punishes wrong-doers by reducing them to lower levels of animal existence. All sin will be reckoned with, she explains through her "machinery" of justice, echoing Paley's image of nature as a vast machine (154). She particularly punishes dishonesty, caning schoolmasters for "telling lies" (158) and reducing Tom to an echinoderm after he secretly steals from her. Tom's recovery from this degeneration only begins when he confesses his sin, as she explains: "I always forgive every one the moment they tell me the truth of their own accord" (172). Tom's odyssey imports the Broad-Church notion of an immanent God directing history into biological evolution. Kingsley suggests that nature rewards honesty through the rise of civilization and punishes lies through humans degenerating into animality. This dynamic of dishonesty-as-degeneration is particularly pronounced in Kingsley's depiction of the Irish. In 1860, he infamously described impoverished Irish people to his wife as "white chimpanzees" (Letters 2:107). His similarly animalistic portrayal of them in The Water-Babies associates such imagined primitiveness with mendacity. The narrator refers to Irish people as "gorillas" who "would not learn to be peaceable Christians" (146-47). Elsewhere, in a digression on rivers, the narrator imagines an Irish servant named Dennis who is incapable of answering questions without lying:

So you must not trust Dennis . . . but, instead of being angry with him, you must remember that he is a poor Paddy, and knows no better . . . [than to] tell you fibs . . . a hundred an hour; and wonder all the while why poor ould Ireland does not prosper like England and Scotland, and some other places, where folk have taken up a ridiculous fancy that honesty is the best policy (90-91).

Kingsley frames British colonization of Ireland as truthful civilization policing and improving mendacious primitives.

Kingsley's insistence on the unity of moral and factual truth in nature's laws went hand-in-hand with insisting on the factuality (however qualified) of scripture. This claim defended his authority as moral interpreter of nature from the encroachments of scientific naturalists, who sought to read nature's moral laws on a secular basis. Spencer had conceptualized ethics as a material evolution and suggested renaming morality "moral physiology" (58). He hence argued, rather optimistically, that the universal tendency towards truthfulness was shown in the growth of commerce, which relied on increasing trust (397). At the same time, much has been made of Kingsley's correspondence with Huxley in the 1860s in which the men found common ground, in spite of their intellectual differences.¹⁴ Huxley's statements during this

exchange sometimes seem to place him in strong agreement with Kingsley on the universe being a moral as well as physical order. In 1860, he wrote of his conviction "that the wicked does not flourish nor is the righteous punished . . . The gravitation of sin to sorrow is as certain as that of the earth to the sun." Huxley also echoed Kingsley's prioritizing of veracity, praising the parson's "truthfulness and sincerity" and declaring: "One thing people shall not call me with justice and that is--a liar" (1:317-19). Yet these comments also illustrate how the rhetoric of natural morality could be secularized. While Kingsley imagined nature echoing Biblical morality, Huxley conceived of an agnostic ethics founded on natural laws alone. In 1868, he claimed nature offered humans an "education" in how to live, stating, "all artificial education ought to be an anticipation of natural education" ("Education" 3:85). Like the deists before them, Spencer and Huxley suggested that nature's moral text might be read independently of revelation.

Kingsley met this threat to his interpretive authority by presenting nature and the Bible as mutually dependent in their revelations. Each acted as a key to unlock the meaning of the other, he suggested. In this case, his argument was helped by the uncertainty of nature's moral symbolism. In 1863, he wrote in a collection of Biblical sermons: "Those whom I have to teach want a living God, who cares for men, forgives men, saves men from their sins:--and him I have found in the Bible,

and nowhere else, save in the facts of life, which the Bible alone interprets". Kingsley's argument took advantage of the past disunity created by natural religion, warning that mere instinctive "religious sentiment," which secularists sought to harness, was "apt (to judge from history) to develop itself into ugly forms . . . into polytheisms, idolatries, witchcrafts, Buddhist asceticisms, Phoenician Moloch-sacrifices, Popish inquisitions, American spirit-rappings" (Gospel x-xi). Kingsley's examples of religion gone wrong reveal the national, racial and religious hierarchy implicit in his natural theology. Liberal Anglicanism derives its interpretive authority, Kingsley implies, from its peculiarly British moderation, carefully balancing traditional belief with recognition of science's discoveries.

While scripture illuminated nature's moral meanings, Kingsley suggested science illuminated the facts of scripture. The Bible did not conflict with evolution, he claimed, but was merely vague on such matters. "How God created," he preached, "the Bible does not tell us. Whether he created . . . this world suddenly out of nothing, full grown and complete; or whether he created it . . . out of things which had been before it--that the Bible does not tell us. . . . It is not a book of natural science" (3). Having told Maurice in the same year of his hope that science and religion would "shake hands at last" (2:181), he presented science and scripture as shading into each other, along with factual and moral truth.

The Bible began with Man and the Earth's creation, Kingsley claimed, because their origins formed the first question of science: "And if man takes up with a wrong answer to that question, then the man himself is certain to go wrong in all manner of ways. For a lie can never do anything but harm, or breed anything but harm" (Gospel 2). Kingsley's language blends scientific and moral truth, describing its opposite not as simply error but as "a lie." Kingsley highlights the factual indefiniteness of scripture and the moral-symbolic indefiniteness of nature to suggest that the two only become fully intelligible when combined.

Yet such efforts to align science and scripture as two parts of a single, moral-physical "truth" did not dispose of the more ominous, emerging notions that nature was amoral and morality was an artificial construct. After Kingsley's death, Huxley would renounce his earlier claims for natural moral laws. Ethics, Huxley argued in 1893, emerged not through conformity but "combat" with the ruthless "cosmic process" ("Ethics" 9:81). As early as 1863, Huxley had written to Kingsley of his despair at "the impassable gulf between the anthropomorphism (however refined) of theology and the passionless impersonality of the unknown and unknowable which science shows everywhere underlying the thin veil of phenomena" (1:345). The material universe was, perhaps, not an anthropocentric text but a nexus of mindless, mechanistic processes. Conversely, Darwin's Descent of Man (1871) argued

(to Kingsley's regret) that moral sentiments had developed from the natural selection of groups over individuals.¹⁶ This view had the potential to relativize morals, since survival could depend on diverse impulses, such as the fratricide and infanticide witnessed among bees (1:73). By materializing morality, Darwin prevented it from standing outside of nature's phenomena as a higher, governing law. Morality might be meaningful only within the artificial edifice of civilization.

In his last years, Kingsley responded to these challenges by dividing the natural world into what he called "the How" and "the Why", representing separate spheres of authority. Yet Kingsley's rhetoric of division paradoxically maintained links between science and theology. In 1863, he had written to Darwin that, although their occupations were different, "Your work, nevertheless, helps mine at every turn. It is better that the division of labour should be complete, and that each man should do only one thing, while he looks on, as he finds time, at what others are doing, and so gets laws from other sciences which he can apply, as I do, to my own" (2:173). Kingsley's politico-economic vocabulary ("division of labour") presents science and natural theology as different points in a single process, pursuing the same unitary truth. By 1871, he had developed this division into "the How" and "the Why", telling secular researchers: "you have no business with final causes, because final causes are moral causes, and you are

physical students only. We, the natural theologians, have business with them" ("Future" 329). By insisting nature had a "Why", he preserved the textual model of natural laws signifying divine moral values. Simultaneously, by dividing the "moral" from the "physical", he presented the former as proceeding from the latter instead of vice-versa. Beneath the material phenomena of science, he declared, lay "an invisible, vital, organizing force" which eluded reduction to mechanistic principles and could only be "the Breath of God".

Yet what morals did God's "Breath" preach? In another lecture of 1871, Kingsley admitted: "Nature's text at first sight . . . seems to say--not the righteous, but the strong shall inherit the land." The world appeared ruled by "selfish competition, over-reaching tyranny, the temper which fawns and clings, and plays the parasite as long as it is down" ("Bio-Geology" 175). Nonetheless, he demanded, "is this all which the facts mean?" The law of "mutual competition," he claimed, was offset by "a law of mutual help" as every organism relied on others to feed and protect it, however unconsciously. Hence, "self-sacrifice, and not selfishness, is at the bottom the law of Nature . . . as it is the law of all religion and virtue worthy of the name" (175-77). Similarly as many Victorians assumed the Old Testament prefigured the New, Kingsley presents nature as symbolically prefiguring the morality that scripture would crystallize. His rhetoric of moral symbolism frames theology's textual interpretation and

science's empirical observation as complementary methods.

While science reveals nature's hieroglyphs, only the theologian can glimpse moral meanings in them.

Kingsley recognized that such meanings were often unclear and questionable, like many textual interpretations. In 1870, he wrote to the geologist William Pengelly: "'Life is certain,' say I, because God is educating us thereby. But this process of education is so far above our sight, that it looks often uncertain and utterly lawless" (2:318). Yet, no matter how inscrutable nature seemed, Kingsley always persisted in his faith that higher, moral meanings lay behind it. His ability to maintain this faith consisted less in his vacillating circles of logic than his emotional attachment to a personal God as preoccupied with truthfulness as Kingsley was. It was his deeply held conviction that God could not lie which enabled Kingsley to look forward so optimistically to a future in which science and scripture would agree fully. Two years before Kingsley's death, Friedrich Nietzsche wrote of truth and lies "in a Nonmoral Sense"; but Kingsley would have rejected this subject as a contradiction in terms. To concede the possibility of nonmoral knowledge would be to invalidate his authority as an interpreter of nature. His example illustrates suggestively how, in Victorian culture, the conflation and separation of factual and moral truth were bound up with institutional and disciplinary struggles for authority.

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Notes

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1. Muller and Meadows argued Kingsley mostly succeeded in reconciling science with his faith. Conversely, Hawley, and, more recently, Hamlin and Hale have stressed unresolved tensions. See also O’Gorman, Lightman (Popularizers 71-81), and Klaver, 351-64, 511-24. On the common and disputed grounds of Victorian science and religion, see Cannon, Turner, Brooke, Lightman, Levine, Buckland and DeWitt.

2. DeWitt, 2-7. On the phrase “one culture,” see Levine.

3. On Protestant ideals of sincerity, see Trilling; Kucich argues Victorian notions of “truth” and “lies” were often more slippery.

4. Letter to George Brimley 2:44; see Buckland 182.

5. On the history of this idea, see Donald 27-37 and Harrison 13-15.

6. See Topham 65-69; Brooke 168-73, 181-89.

7. Blaisdell 164-74; see, for example, Kirby 2:48, 104.

8. Gates and Shteir argue the latter mode displaced the former in the 1850s (5-15). Lightman claims natural theology survived for longer, although in different forms (Popularizers 39-43). Smith suggests writers wavered between these modes (292-3). Fyfe (7) and Topham (60) argue "natural theology" was increasingly replaced by "theology of nature" which celebrated nature as God's creation without relying on it as evidence of God. See Lorsch (20) on nature's designification.
9. See Bellon 954-55.
10. See Daston and Galison 15-18; Levine Dying 27.
11. Proverbs 25:2; see Blaisdell 167.
12. See Hamlin "Aquarium" 81.
13. See Turner 176-190; Barton 73-80.
14. See Hamlin "Green" 269-71; Hale "Monkeys" 552-55.
15. See Hawley 470; Klaver 477-83; Hale "Bulldog" 991. On Huxley's moralization of nature, see DeWitt 36-37, and Lightman Agnosticism 131.
16. On Kingsley's disagreement with Darwin, see Hale "Monkeys" 587. On Darwinian moral relativism, see Dixon 175-76.

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