The origin of Negroes, Ephraim Chambers wrote in the 1728 Cyclopaedia, "and the cause of that remarkable difference in complexion from the rest of mankind, has much perplexed the naturalists; nor has anything satisfactory been yet offered on that hand." A generation later, in the 1750's, this was still true, although Claude Nicolas Le Cat was to influence considerably the picture. It is hard to know if Chambers, no scientist or medical man, would have been at all impressed by Le Cat's theories. But if he had heard or read them, he might have modified somewhat his statement in the Cyclopaedia.

From the vantage of the history of science, Le Cat's entire career, quite unsurveyed, incidentally, is as exciting as that part of it represented by his contribution to the age-old debate about the color of negro skin, its origins and history, from the beginning of man to the eighteenth century. Born in 1700 and dead by 1768, Le Cat was the chief physician and surgeon of the Hôtel-Dieu, the leading hospital in Rouen, a member of many French and foreign scientific societies, and the author of over a dozen medical treatises. In 1762 he retired from his hospital post, and during his remaining seven years wrote most of the books that utilize his researches, observations, and reading of over fifty years.

His scientific contribution to the race argument has either been neglected or thought so insignificant until now that one looks in vain for his name in most modern reference books in the history of science and medicine as well as in encyclopaedias and dictionaries of biography. And yet, careful scrutiny of his works reveals that
he played a role in advancing biological understanding of skin color. He himself was apparently aware of this role, and he accordingly devoted his greatest scientific energies to what we today must regard as his most significant medical work, *Traité de la couleur de la peau humaine en général & de celle des Nègres en particulier*, published in Amsterdam in 1765.\(^2\)

Le Cat's treatise contradicts previous theories maintaining that bile is responsible for the color of human skin; this argument had been advanced as indisputable scientific fact in the earliest writings of Egyptian medicine, later appeared in Homer, Strabo, Ovid, and Pliny, and was advanced throughout the Renaissance and for much of the eighteenth century. The *Teatro Crítico* of Father Feijoo is typical of the impressionistic manner in which the bile argument was set forward: succinctly, without experimental support, and as an *ipse dixit* argument.\(^3\) Other eighteenth-century naturalists, including Raymond de Vieussens, Buffon, La Mettrie, D'Holbach, and numerous travel writers, also repeated the argument as if it were gospel truer than truth.

In Italy Albinus and Sanctorini supported a bile theory (although these men recanted and at several junctures even displayed skepticism about the belief), and in France, where it seems to have been extremely popular, it attracted numerous advocates, and none more vocal than Pierre Barrère, a Perpignanese physician and medical author who strenuously championed it in 1741 in a dissertation on the cause of skin color, *Dissertation sur la cause physique de la couleur, des Nègres, de la qualité de leurs cheveux, & de la génération de l'un & de l'autre*. Germans, Scandinavians, and Englishmen also gave the belief their stamp and seal, and it is accurate to say that by 1750 the belief was prevalent—truly as popular as the “monster-mongering” sport, to use the phrase of Professor Jordan in his edition of Samuel Stanhope Smith's *Essay on the Causes of Complexion*—that blacks were another species of man, sans the ordinary human organs, tissues, and heart, and (of course) sans soul.\(^5\) Le Cat's theory, in contrast, introduces a black substance, "ethiops" (in other words, melanin and its cell the melanocyte), which, he maintained, is present to some extent in all creatures, white and dark, but to a greater degree in blacks; and it is this that distinguishes them. This theory had been Malpighi's,\(^6\) and as I shall show in the paragraphs below, Le Cat, who had read and studied Malpighi's works, developed it. Establishment of the precise connection between the theories of the two men is important because one cannot understand the significance or implications of Le Cat's theory of ethiops without first understanding Malpighi's.

![Figure 1. Nerves in the dermis and epidermis (one dimensional view)](image)

* According to Le Cat, neither the nerve axon nor the mucous sheath contains melanin (i.e., ethiops).

Both Malpighi and Le Cat believed that ethiops is contained in the nerve tips, where it permanently resides. But whereas this idea is merely suggested, without detailed development, in Malpighi's writings, Le Cat made it the central focus of his argument. Furthermore, he tried to show that ethiops is not governed by the liver, pancreas, or gall bladder, but is indigenous to the membrane surrounding the tips of nerve cells. Le Cat based this assumption on microscopic experiments he had done with frogs and other animals. In the frog, for example, "ethiops" (i.e., melanin) is in fact present anatomically in nerve cells, but not in human beings. In our anatomy, pigment is exclusively located in epidermal tissue, which is apart from the nerve cells. Le Cat could not have known this; microscopes in the 1730's and 40's were not powerful enough to distinguish sharply within human dermal tissue. Nerve tips, under weak microscopes of the type Le Cat is likely to have used, would
appear to extend as far up as the epidermis, whereas, in fact, they do not; they are subdermal. It was not until the nineteenth century that microscopy enabled medical men to see that an epidermal-subdermal barrier (basement membrane) exists and that nerve cells do not penetrate this barrier.

Le Cat, who was logical and reasonable in his inference that human anatomy is almost identical with animal anatomy (frogs, chameleons), was so much convinced of the presence of ethiops in nerve cells that he directed his energies to other questions about the physiological nature of ethiops. For example, he asked how blacks originally acquire this ethiops—a question we might think would have interested Malpighi but which apparently never did. Le Cat tried to formulate an answer, but it was not as clear as we would hope: ethiops, he maintained, comes not from the sun, climate, or torrid zones alone, but from these climatic conditions in conjunction with the peculiar physiological traits Negroes developed over long periods of time. Not a perfectly clear formulation, to be sure, but in 1765 there was no Darwinian evolutionary theory of selection. Yet Le Cat’s staunch belief that ethiops is somehow indigenous to blacks reveals a color argument scientifically more sophisticated than the theories of his contemporaries or near-contemporaries Malpighi, Feijoo, Sanctorini, and Barrère.

Like all scientific hypotheses, Le Cat’s must be judged for its ultimate accuracy. In this regard it fails, as I shall show in detail below. But it ought also to be viewed in the context of his basic assumptions concerning physiology and the common assumptions of his age. In this regard, Le Cat’s theory shows up rather well on several counts, not merely one. First, he believed that the nervous system controls the organism—not a revolutionary assumption in the 1760’s, but one that was in constant need of focusing and that required application to the racist debates in medicine. In assuming this view, he was in line with the most progressive mainstream of current European medicine and physiology. It was a view demonstrating that he had read and understood Willis’ brain theory and Haller’s radical but nevertheless accurate thesis about nervous action in relation to muscular contraction. Second, he was right to assume that ethiops is somehow controlled in its action by the nervous system. We today know that the pituitary, an integral part of the nervous system, regulates many of the functions of melanin; Le Cat could not have known this, but was not very far from the truth in assuming that nerve tips extending into the epidermis regulate pigment cells.

If his conception of the nervous system is lacking in certain areas, we ought to be tolerant within reasonable limits. For example, Le Cat believed that the animal spirits, not subject to the laws of physics and chemistry, pervade the hollow tubes of the nerves. This is untrue, but most scientists—good scientists—of his epoch also believed it. Moreover, Le Cat held that a mucous sheath (corps muqueux) wraps the entire nerve cell. Although this idea is not entirely true, it is closer to the truth than the notion of many of his contemporaries, and it is certainly a more advanced concept of the anatomy of this part of the nervous system than Malpighi’s. Con-
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controversies about the precise physiological structure of the "outsides" of nerve cells had vigorously been carried on throughout the eighteenth century in England, where the question was debated in the Royal College of Physicians and in the Royal Society, as it was too on the Continent by Boerhaave, Hoffman, and lesser-known figures. It is true that Le Cat could not add substantially to these debates or radically change the theories of these men. But he did spend more time than they examining ganglions, the ends of nerves, under the microscope, and eventually he developed a fairly sophisticated conception of nerve tufts (papilles nerveuses) which he likened to the nipple-like structures of the tongue. Furthermore, he demonstrated that they expand and contract mechanically, especially when regenerating themselves.

Considering the assumptions of physiologists in his age, therefore, Le Cat did not fare badly. In fact, he did exceptionally well, erring only in the points described above and, importantly, in his mistaken idea that the nervous system of humans is exactly, or almost exactly, the same as in frogs. To summarize his anatomical reasoning, he built his theory on some of the best physiology of his day and buttressed his assumptions with microscopic observations of several decades.

But even so, he was unsatisfied about the precise nature, histologically, of ethiops. And as a result of his dissatisfaction he reconsidered the matter, he says in his Traité, many times before satisfying himself. The most puzzling question, he believed, related to the origin of ethiops. He had seen this substance expand and contract under the microscope, so there could be no question of its physical nature: it could not be non-material, as were animal spirits. He was also certain, although it is hard for us to know why, of its presence at birth in blacks, and that there was no possibility of its being acquired after maturation. It was transmitted from generation to generation by the sun's rays, he thought, but these rays alone could not produce the substance. Heat could expand it, he believed, in the same way that heat causes other types of physical expansion.

Since Le Cat's experiments with various animals played an important role in his theory in the Traité, something, however brief, must be said about these, as well as about the significance of these experiments for modern medicine. Le Cat was convinced of the necessity of microscopic investigation, unlike many of his contemporaries, rationalists at heart who placed little faith in the microscope. He had seen ethiops in many animals and fish, but especially in the cuttlefish or squid (sèche). For two decades (1740–60) he observed their large black cells under various kinds of microscopes and deduced that human skin tissue must be similar. What he actually saw under the lens were melanocytes, microscopically quite prominent and very large in squid; but he was ultimately incorrect to assume that melanocytes in black men were structured similarly to those he observed in cuttlefish. Such reasoning by analogy was far from outlandish (scientists today, for example, experiment on mice and then extrapolate all their findings to humans); nor was his thoroughly logical assumption that Negroes have some sort of greater melanocyte production than do whites. Time has proved him correct, although his reasons were different from ours. But he had no conception of the melanocyte cell itself, its nature, anatomical structure, boundaries within the basal layer, accumulation at the base of the epidermis, chemical composition, and evolution throughout the life of a normal human being.

If Le Cat's theory is "translated" into modern medical terminology (and extreme caution must be employed in such a translation), these approximate statements obtain. Melanocytes are scattered throughout the epidermis but do not appear, whether in whites or blacks, in the basement membrane or dermis. These two layers, dermis and epidermis, are separated by a boundary (the basement membrane) through which nerve tissue does not penetrate. Therefore, it is quite impossible, by the standards of modern anatomy, to imagine melanocytes in the dermis, or, conversely, nerve cells in the epidermis. Moreover, these melanocytes do not differ significantly, if at all, in chemical composition in whites and blacks, although their number does. Blacks are known to have many more melanocytes per epidermal area than whites, but present-day knowledge of the hormonal activity of melanocytes is not sufficient to indicate if this disparity influences bodily functions. But it does influence skin pigmentation, thereby accounting in part for the difference between fair and dark peoples. There are of course
other factors, mostly genetic, that influence this coloration, but they need not be explained in detail here.

To turn now to Le Cat within this brief “translation”: as I have already indicated, Le Cat was wrong on several counts, especially in his notion that nerve cells penetrate through the basement membrane. But he must be given credit for his intuitive leap in suspecting that bile cannot influence pigment, and thus for changing the whole course of physiological theory about skin. He must, it seems to me, also be given credit for his suspicion that the nerves play a more extensive role in the body than was thought at this time. Haller, Whytt, and other neurologists demonstrated in their own age that the brain required further examination, but it was Le Cat who suggested, however primitively, that the blood channel and nervous system were connected more intimately than most medical men thought.9 Le Cat, viewed in this light, clearly emerges as a more important physiologist than Malpighi, especially if his contribution to the racist debates is the yardstick of measurement.

Malpighi, who died in 1694 (only six years before Le Cat was born), believed in an altogether different theory, one much less scientific and sophisticated: that all men were originally white, but that sinners among them had degenerated into black. In putting forward this remote divine cause of black skin, Malpighi impeded rather than advanced arguments regarding race among scientific men. It is true that he later abandoned his divine cause and substituted a proximate physiological cause: namely, a mucous sheath separating the dermis from the epidermis, recognition of which solved the physiological riddle puzzling anatomists for centuries. But he was wrong here, as wrong as Le Cat, although in a different way: the basement membrane, Malpighi’s mucous sheath, does not contain melanin. Malpighi also theorized about a “mucous liquor” determining skin color, but he never stated where this liquor is located or how it operates, and Le Cat sensed this gap early in his researches. He dedicated his experiments, in part, to a refinement of this theory, but never could convince himself that ethiops was confined to a single sheath within the dermis. In other words, Le Cat argued for more area within skin tissue, for the whole basal cell and its surroundings as a zone wherein ethiops was contained. Malpighi, on the other hand, was persuaded that a localized substance must necessarily be the cause of differences in skin color.10 Having established to his own satisfaction that the cutis as well as cuticle of blacks is white, he reasoned that blacks differ anatomically only in this mucous liquor. In this regard he was certainly more advanced than all his seventeenth-century colleagues, but not so advanced as Le Cat, who consciously tried to show the connections between the “mucous liquor” and the nervous system—a connection that we are now just beginning to learn does exist.11 Le Cat, in his own way, was saying that the nervous system (brain, nerves, etc.) has some control of pigment activity (we know that the pituitary controls the hormonal activity of melanocytes). No one would wish to argue that this discovery in anatomy should bear Le Cat’s name, but he was closer to the truth than his colleagues in France, and certainly those in England. And it is precisely in the bold imaginative leap of this connection, however primitively made, that Le Cat demonstrated his sound scientific intuition.

His contemporaries failed to understand him. Most never deemed his ideas worthy of the labor of serious comprehension: they continued the racial debate, usually asserting once again all the inadequate previous theories—but no one veered from the age-
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old lure of the bile theory. Riolan, Littre, and Morgagni, for example, were perplexed by the origin of black skin, and hypothesized that since most Negro skin had white patches, black men must originally have been white: a curious argument possessing little anatomic veracity. Later on, the sun turned their bile black (so the argument continued) and also their skin. For these scientists the relation of sun and bile was cause and effect: too much sun caused bile to blacken, and bile determined skin color. QED. Albinus, an eighteenth-century Italian scientist (whose name, incidentally, has no connection to “albino”) proved to his own satisfaction that Negro bile, both hepatic and cystic, was black.\(^{12}\) Santorini concurred with Albinus in considering bile the only substance in the body capable of influencing skin color.\(^{19}\) These men, oppressed by the tyranny of the ancient theory of bile, with centuries of weight behind it, had either not read Malpighi or did not comprehend him. (It is naturally possible that they read and rejected him, but this seems unlikely in view of the zeal with which Santorini and Albinus approached the theories of others; one wonders, moreover, why they would not have refuted him in print if they had renounced his theories.) Elsewhere than in Italy, the situation was not different. Winslow in Denmark was undecided,\(^{14}\) and Grossard, a Le Cat student who later became a professor at the medical school in Montpellier and who also happened to have undertaken important research into the lymph system, impressionistically speculated that lymph was more important than bile in determining color; but he was surprised to discover in autopsies that Negro lymph is every bit as white as the white man’s.\(^{15}\)

Then in 1741, a momentous episode in the eighteenth-century history of this medical debate occurred. Barrère, in France, published experiments asserting that Negro bile is black, and that it alone causes the black pigment in Negro skin.\(^{16}\) Not the theory but the experiments won him attention. The bile theory was centuries old; but Barrère now endowed it with an authority it had never had. His book stated that his conclusions were based entirely on laboratory studies, thus creating the impression that black bile and its effects, long suspected but never seen, were as verifiable as the sec-

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ond law of motion. But the careful reader would have found that Barrère gave himself away. Blacks acquired black bile, he postulated, by dwelling in hot jungles. He himself had not, of course, seen black bile in Negroes, nor could he account for the fact that generations of white men living in Africa never turned black. He somehow took black bile on “faith,” having viewed something abnormal resembling it, perhaps, in a few diseased bodies.

It is therefore greatly to Le Cat’s credit that, only twenty years after Barrère’s theory won universal acclaim, especially in France, he intuited and then demonstrated that it was specious. Historians of science may in the future show that certain French and English medical men anticipated Le Cat in this regard, but even so, some credit, however little, must go to him; at least, he must be rescued from the total oblivion in which he has until now remained. This is all the truer when it is remembered that towns like Rouen were somewhat isolated. If Le Cat had done his experiments in Paris, with the aid of many exceptional colleagues, we might feel more wary of granting him much honor; but he swam against the tide alone, in a small northern French city that had never been a medical center. An idea of his courage in rejecting the dominant belief in bile as the single and sole determinant of skin color is glimpsed by examining reviews of Barrère’s theory in comparison to those of Le Cat. If Barrère was recognized and praised, Le Cat was disparaged as a shallow rationalist, even by English scientists who ought to have known better. Monsieur Eloy, author of the four-volume Dictionnaire historique de la médecine, published in 1778, commented favorably upon Barrère’s bile theory but criticized Le Cat’s nerve-ethiops theory as a wild hypothesis: “Il explique ensuite le sentiment qu’il a adopté, mais comme il n’est fondé, ni sur l’observation, ni sur l’expérience, on est en droit de le renvoyer dans la classe des hypothèses qui sont plus ingénieuses que concluantes.”\(^{17}\)

Two years after Le Cat’s systematic demolition of the bile theory in the Traité, the Abbé Demanet published a Dissertation physique et historique sur l’origine des Nègres et la cause de leur couleur (1767),\(^{18}\) wherein he repeated the old bile arguments without mentioning Le Cat. Such an omission in itself is insignificant, but it reveals the typical neglect of Le Cat before the beginning
of the nineteenth century. While it is true that his research on skin was occasionally mentioned during the last quarter of the eighteenth century—for example, in Jean Paul Marat’s *Philosophical Essay on Man* (London, 1773)—his theory, however inchoate, of the interactions of Ethiopians and the nerve system was either too advanced or physiologically too radical, or appeared too clouded by physiological details, to admit of acceptance or recognition in his own time. Or it may have been left unregarded altogether, though this possibility is hard to understand in view of Le Cat’s reputation. This was the man, after all, who had won the esteemed Berlin prize in physiology and about whom the editors of the *Gentleman’s Magazine* said in 1753 he “ought to be universally read.”

Throughout the last quarter of the eighteenth century, the scientific-medical community debated questions regarding the origin of Negroes and their black skin. As revolution approached and man’s thoughts were deflected, it abated; but until then the question consumed them, though it seemed to arrive nowhere. Although some writers pointed out the loopholes inherent in the hot sun-black bile argument, none gave quite such specific reasons as Le Cat. Samuel Stanhope Smith professed to have read much literature before turning up any tangible conclusions in his *Essay on the Causes of Complexion . . .*, and ultimately admitted that not much new could be said on the subject. Essentially a synthesizer, he was satisfied to relegate Le Cat to a single mention in a voluminous footnote in which the Rouen surgeon is, of course, lost. Whether Smith actually read Le Cat is doubtful, but his estimate cannot be misconstrued under any circumstances. (He had at least heard of Le Cat and his theories, which is more than can be said for other writers; most authors simply disregarded Le Cat altogether, and I have already suggested that this is not likely to have been prompted by his obscurity.) In 1768, three years after Le Cat’s *Traité* was published, the first edition of the *Encyclopædia Britannica* appeared. In the article entitled “Negroes,” the anonymous author commented: “Dr. Barrère alleges that the gall of Negroes is black, and being mixed with their blood is deposited between their skin and scarf-skin.” But no mention appears of Le Cat, or of his magistral, though cautious, challenge to the theory of bile as the cause of color. Though this anonymous author took notice of “Dr. Mitchell of Virginia” (John Mitchell, author of “an Essay upon the Causes of the Different Colours of People in Different Climates”), he apparently had never heard of Le Cat, or if he had, could not see the difference between the sophistication of Le Cat’s theory and the primitiveness (as well as repetitiveness) of Barrère’s. Like Barrère, he confused himself in this article by citing bizarre cases of color change; yet he never paused to ask what the physiological basis of skin color was.

Le Cat himself took time out to study such fantastic cases of blacks turning white, or whites turning black, but in each instance he attributed the change to severe illness, body change during pregnancy, or wild growth of the “Ethiopians.” That is, he perceived these were exceptional cases, and drew no paradigms from them. His balance of induction and deduction was intelligently managed, and one observes few cases in the *Traité* of his going out on a limb or forcing a conclusion from an isolated example. But when it was time to generalize, he surrendered prejudice and tradition to his empirical findings. He ruled out climate as a primary cause: a Norwegian clan migrating to the Sudan could never become black, at least not in the course of a few centuries. He thereby discarded adaptive conditions and concentrated on physiological processes. If he could have known the approximate age of the world, he might have been able to anticipate Charles Darwin in *The Descent of Man and Selection in Relation to Sex*, and might also have reasoned that there must have been selection for lightly pigmented individuals in higher latitudes since they could better utilize sunshine. But the chronology of the world in 1765 was still in doubt, and so it remained until the nineteenth century; the age of man, indeed, is still to be determined. And Le Cat, who really cannot be criticized for this lack of knowledge, demonstrated his abilities as a model-maker by refuting the bile theory and turning to the nervous system’s interaction with other systems.

The significance of this essay for a symposium on racism in the eighteenth century is not easily grasped. For the men it treats, Le Cat, Malpighi, and to a lesser extent Albinus, Sanctorini, and Gros-sard, were never involved in the debates about race. Philosophers
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like Voltaire and Diderot held their personal opinions about the real status of black men, and especially about their physiological similarity or dissimilarity to white men. But Voltaire and Diderot never engaged, to my knowledge, in medical experiments, as did Le Cat; besides, they allowed other concerns—nationalistic, economic, religious, philosophic—to influence their final decision about the species to which black men belonged.\textsuperscript{28}

Le Cat, so far as I know, had no such complicated concerns. He was not a "philosophical" scientist in the way his English colleague Dr. Robert Whytt was; he was content to experiment and report his observations. This is not to imply that his scientific assumptions were simple or lacking in any way, but Le Cat, unlike the French philosophers discussed elsewhere in this volume, had less ambitious plans for himself. He desired, understandably, to rise as high as possible in medical research, and for this aspiration he was respected in his own age. Yet he remained content to leave it to others to comment on the social implications of his discoveries.

Perhaps, then, the significance of Le Cat's work is that there is no significance. I am personally persuaded that thinkers who debate a topic like racism without understanding something about the physiological bases of skin color cannot be sophisticated thinkers. They may have a great deal that is important to say about other topics, e.g. the nature of man, God, the life processes, the human condition; and so forth. But this is a different matter from making a significant statement, one worthy of recording in the annals of history, about racism. Too many examples of my point abound in this volume for me to provide detail; and no one is going to think less of a Montesquieu or a Voltaire because either thought blacks were a different species of man, without taking the trouble to read contemporary scientists like Le Cat. But we may be certain that if more people in the eighteenth century had read scientists like Le Cat, the nature of the debates discussed today would be different. Laymen cannot be expected in any age to comprehend the technical writings of medical men, but the ideas of a Le Cat, for example, were explained in popular magazines like the Gentleman's, and were epitomized in everyday language for the common man.

If I may conclude on a modern note, it seems to me that the situation today is not altogether different from that in Le Cat's age.

Le Cat and the Physiology of Negroes

Thinkers from the common man to professional philosophers have their personal views about the black man, his capabilities, limitations, potential.\textsuperscript{28} Yet not very many of these thinkers have taken the trouble to read the recent radical theories of Dr. Jensen and his team.\textsuperscript{24} The content of these theories is not in question: they may be right, they may be wildly wrong. But they have been put forward by scientists of a very high caliber, with credentials beyond question, who hopefully have scientific truth as their first concern. Who knows if historians of science two centuries in the future will prove Jensen and company correct? Who knows what changes in the social structure of American life will be effected by Jensen's theories, if they are accurate? Or has a monumental change occurred, and do we now live in an age when certain theories are simply too dangerous to be put forward regardless of veracity? These are big questions, but must be left for another occasion.

NOTES

1. There is no biography. Information, and precious little exists, is scattered: see N. F. Eloy, Dictionnaire historique de la médecine ancienne et moderne, 4 vols. (Paris, 1778), I, 563–71, for the only sketch. Nothing at all is said about Le Cat in the standard histories of medicine by Arturo Castiglione, Fielding H. Garrison, Sir William Osler, Theodor Puschmann, Henry E. Sigerist, Charles J. Singer, René Taton, and E. A. Underwood. René Taton's Enseignement et diffusion des sciences en France au xviie siècle (Paris, 1964), briefly discusses Le Cat's anatomy courses at the Hôtel-Dieu in Rouen. Robert Darnton, Mesmerism and the Enlightenment (Cambridge, Mass., 1967), mentions Le Cat in relation to hypnotism. Le Cat's private papers survive and are available in the Archives of the City, Rouen, France. On January 31, 1739, Le Cat was elected a foreign member of the Royal Society, London (Thomas Thomson, The History of the Royal Society [London, 1912], Appendix, xli). After this time his anatomical works were regularly translated into English and reviewed in English journals. His interactions with Dr. James Parsons, F.R.S., are described by John Nichols, Literary Anecdotes of the Eighteenth Century, 6 vols. (London, 1812), V, 475–76. By 1753 Le Cat, many of whose communications were now published in the Philosophical Transactions of the Royal Society of London, was sufficiently well known to be referred to by a columnist in the Gentleman's Magazine, XXIII (1753), 403 as "the ingenious writer ... who ought to be universally read." In 1765 Le Cat won the prize of the Berlin Academy by answering their set of physiological questions on the structure of nerves. Offered by the Acad-
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omy since 1753 but without a candidate, the prize answers were published as Le Cat’s Dissertation sur l’existence & la nature du fluide des nègres & son action (Berlin, 1765). The actual questions and an account of Le Cat’s achievement in answering them are found in A. von Harneck, Geschichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin (Berlin, 1901), I, 400. Le Cat was congratulated by the acclaimed scientist Haller for his attainment.

2. Extending to almost two hundred pages, it was not translated into English or reviewed in English periodicals as almost all Le Cat’s other works had been. The reasons are not clear: perhaps the subject matter was too controversial for the more sedate reviews and too conservative for others.


8. This concept arose in the mid-nineteenth century and required at least Schwann’s theory of the cell. See Bobbie Williams, “Human Pigmentation,” General Anthropology (forthcoming, 1973), pp. 487–523, the best scientific treatment of skin color I have seen. I am grateful to Professor Williams, Department of Anthropology, University of California, Los Angeles, for making this unpublished material available to me.

9. This is a chapter of the history of science not yet surveyed.

10. Opera Omnia, II, 215–38. This notion was transmitted to the eighteenth century as is made clear by dictionaries and encyclopedias. See, for example, Abraham Rees’ article “Complexion” in The Cyclopaedia; or, Universal Dictionary (Philadelphia, 1810–24), IX, no pages.

11. I.e., the pituitary regulating functions of melanocytes. Precisely why this is the case is unknown as yet, as most histology textbooks explain. In general, little is known about the influence of the nervous system on hormonal activity. As an example of another area in which the influence of the nervous system is not well understood there is the gyral cell, separating the blood system and the brain. Before the 1920’s it was not known that medicines could pass through this barrier, i.e., penetrate from the blood into the brain, and consequently affect the nervous system.

12. See Bernardus Albinus, De Sede et Causa Coloris Aethiopam (Leiden, 1737), pp. 267–78.


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15. Grossard never published books, but his ideas and writings were circulated in France among interested doctors. He consulted frequently with Le Cat in Rouen and at scholarly meetings.

16. Dissertation sur la cause physique de la couleur des Nègres, de la qualité de leurs cheveux, et de la génération de l’un et de l’autre (Paris, 1741). A brief survey of Barrère’s life appears in Elroy’s Dictionnaire historique de la médecine, I, 265. Although Barrère’s books never attained the same importance in England as Le Cat’s, his name and theory (i.e., champion of the bile theory) carried great weight there. Nothing in France contributed more to the prestige of Barrère’s theory than the extensive review and serious treatment he received in the Journal des Sceaux (February 1742), pp. 97–107. See, for example, Edward Long’s discussion of the scientific origins of Negro skin in his important treatise A History of Jamaica, 3 vols. (1774), II, 351–52, which reckons with Barrère but has never heard of Le Cat: “Anatomists say, that this reticulae membrane, which is found between the Epidermis and the skin, being soaked in water for a long time, does not change its colour. Monsieur Barrère, who appears to have examined this circumstance with particular attention, as well as Mr. Winslow, says, that the Epidermis itself is black, and that if it has appeared white to some that have examined it, it is owing to its extreme fineness and transparency; but that it is really as dark as a piece of blackcloth, reduced to the same graticity [sic]. That this color of the Epidermis, and of the skin, is caused by the bile, which in Negroes is not yellow, but always as black as ink. The bile in white men tinges their yellow skin; and if their bile was black, it would doubtless cause blackness. Mr. Barrère affirms, that the Negro bile naturally secret itself upon the Epidermis in a quantity sufficient to impregnate it with the dark colour for which it is so remarkable. These observations naturally lead to the further question, why the bile in Negroes is black?” The tone and weight of Long’s prose in this passage makes it clear that Barrère’s authority is beyond question and that he represents the most valid school of thought. Only Buffon receives an equal amount of esteem in Long’s chapter.

17. I, 571. An earlier version of the dictionary appeared in 1755.

18. Published in Paris, I have found no biographical information about Demanet of any note.


20. The author throughout refers to Barrère as an authority. The truly amazing thing, from my vantage point at least, is the attention Barrère’s treatise received and the almost complete neglect of Le Cat’s.

21. A study in depth of Le Cat’s scientific writings would, of course, have to explain why Le Cat was able to posit connection. His books on the physiology of the nervous system made him eminently qualified. See, especially, his prize-winning volume, Dissertation sur l’existence & la
RACISM IN THE EIGHTEENTH CENTURY

nature du fluide des nerfs (Berlin, 1765), in many ways one of the genuinely radical theories of the age. Also of help were his medical treatises on the anatomy of the passions, such as Traité des sensations & des passions en général (Paris, 1767).

22. Much “history” can of course be accumulated documenting virtually every aspect of the racism debates of the eighteenth century. But every age adheres, whether it knows it or not, to primitive assumptions about what constitutes “scientific belief”; and we cannot penetrate to the core of racism in the Enlightenment unless we know precisely what it believed about the scientific bases of the skin question.


24. Arthur R. Jensen has argued that genetic rather than environmental factors account for differences in IQ for the most part. He further claims that those environmental factors that do operate are likely to be nutritional, dating to the prenatal period: “How Much Can We Boost IQ and Scholastic Achievement?” Harvard Educational Review, XXXIX (Winter, 1969), 1–123. Those who replied to Jensen in the next issue of the journal seem more bent on airing their own views than in considering his: “Discussion,” HER, XXXIX (Spring, 1969), 273–356.

THE AMERICAN SOCIETY FOR EIGHTEENTH-CENTURY STUDIES

PROGRAM

OF THE THIRD ANNUAL MEETING

March 23–25, 1972

University of California at Los Angeles

Thursday, March 23

Morning Session

THE STATE OF SCHOLARSHIP AND INSTRUCTION IN EIGHTEENTH-CENTURY STUDIES

Presiding: Donald Greene, secretary of the Society

Malcolm S. Cole (University of California, Los Angeles)

English Literature: “The Whig Interpretation of Literary History”
Henry Knight Miller (Princeton University)

British History: “Whigs and Tories: Namier and After”
John B. Owen (University of Calgary)

Luncheon Address: “Racism in the Old Province of Quebec”
Hilda Neatby (Queen’s University)

Afternoon Session

Presiding: G. S. Rousseau (University of California, Los Angeles)

“Liberty and Libertinism: Form and Content in Picaresque Fiction”
Maximillian F. Novak (University of California, Los Angeles)

“Pigault Lebrun: A Late Eighteenth-Century Precursor of the Popular Novel”
Gregory Ludlow (New York University)