The Psychoanalysis of Fire
Literary critics have been aware of the great importance of Bachelard's work for many years, but this is the first time The Psychoanalysis of Fire has been available in English. Professor Ross's lucid and eloquent translation gives an excellent sense of the original, which has a subversive wit reminding the English reader of the prose style of the nineteenth-century Samuel Butler. I speak of literary critics, because, as its conclusion makes clear, this is the area in which The Psychoanalysis of Fire lies, despite its title and the numerous references to its author's earlier scientific works. Nearly a century ago Thomas Huxley, discussing the limitations of the scientific method, remarked: "I cannot conceive how the phenomena of consciousness, as such, are to be brought within the bounds of physical science." He did not mean that no science of psychology would ever be possible, but that the process of perception could not nullify itself, so to speak, by becoming objective to itself. Sciences are placed at various angles to the perceiving process, as physics is at an angle to the primitive categories of hot, cold, moist and dry, or to the primitive perception of red and blue. Psychology occupies another angle of perception, and Bachelard has begun to isolate still another, a basis for a systematic development of the critical study of the arts.

The scientific procedure normally begins empirically, with reality thought of first of all as "out there," after which it gradually
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becomes incorporated into an intellectual construct. The arts, on the other hand, begin with a constructing power, generally called imagination, and embody it in forms with a clarity of communication that makes them objects of perception to others. The units of this constructing power are analogy and identity, which appear in literature as the figures of simile and metaphor. To the imagination, fire is not a separable datum of experience: it is already linked by analogy and identity with a dozen other aspects of experience. Its heat is analogous to the internal heat we feel as warm-blooded animals; its sparks are analogous to seeds, the units of life; its flickering movement is analogous to vitality; its flames are phallic symbols, providing a further analogy to the sexual act, as the ambiguity of the word “consummation” indicates; its transforming power is analogous to purgation. These links of analogy are so adhesive that they spread all over the universe: we see in this book, as often elsewhere, how the pursuit of one mythical complex tends to absorb all other myths into it. The reader should consult Bachelard’s books on the other three elements for a corrective.

It is possible to take up a construct based on such analogies and correspondences, and then apply it to the external world as a key to the explanation of its phenomena. The typical examples of such constructs are in occultism, though they exist also in the Prolemaic cosmology of the Middle Ages, with its correspondences of the seven metals, seven planets, seven days of the week, and the like. From one point of view, a somewhat narrow one, such constructs are both bastard art and bastard science, combining the limitations of the two with the genuine achievements of neither. A more liberal view might see them rather as helping to expand the horizons of both. We notice that poetry shows a strong affinity for constructs based on analogy and symmetry, Prolemaic in Dante, occult in the Romantics and their successors down to Yeats. For the poet, the elements will always be earth, air, fire and water; for the poet, the sun will always rise and set as it moves around the earth. It is only in science where such myths are a nuisance; yet even in science the tendency to make them is extraordinarily persistent. Almost every major group of discoveries in science brings with it a great wave of speculative cosmologies based on analogies to them. Bachelard gives many quaint examples from eighteenth-century science, along with such analogy-myths as “spontaneous combustion.” He could have gone on with the nineteenth-century speculations about “odic force” and the vitalist philosophies that followed early Darwinism, both of them pure fire-myths.

The proper place for all such analogy-making is literature, or, in earlier times, the mythology which eventually develops into literature. Bachelard does not explicitly say that mythology, considered as a body of stories, is potential literature, but the whole trend of his book is towards that principle. He quotes some of the myths about the origin of fire which include the theme of a woman’s hiding fire in her belly. This feat is known to be anatomically impossible by those who are telling and listening to the story, so why should it be told? We recall that many similar stories are told about water, that there are more highly developed stories of the Jonah type, where a human being disappears into a monstrous belly, that the conception of a hidden interior world of fire is the basis of Dante’s Inferno—in short, the story illustrates a structural principle of story-telling, and its study eventually falls into the area of literary criticism.

Centuries ago it was believed that the four possible combinations of the four “principles,” hot, cold, moist and dry, produced, in the organic world, the four humors, and, in the inorganic world, the four elements. The hot and dry combination produced choler and fire, the hot and moist blood and air, the cold and moist phlegm and water, the cold and dry melancholy and earth. The four elements are not a conception of much use to modern chemistry—that is, they are not the elements of nature. But, as Bachelard’s book and its companion works show, and as an abundance of literature down to Eliot’s Quartets also shows, earth, air, water and fire are still the four elements of imaginative experience, and always will be. Similarly, the four humors are not a conception of any use to modern medicine; they are not the constituents of human temperament. But they may be the elements of imaginative perception, and Bachelard’s analysis of Hoffmann’s fire-images is linked to a suggestion that poets may be “humors” not in their bodies or characters but in their poetry, a poetic temperament being reflected in a preference for the corresponding element.

What Bachelard calls a “complex” might better be called something else, to avoid confusion with the purely psychological complexes of actual life. I should call it a myth, because to me a myth is a structural principle in literature. For example, there is, in Bachelard’s sense, a literary Oedipus complex: it appears in every comedy
in which the hero is a son outwitting his father to get possession of a courtesan or other tabooed female. It is undoubtedly related to the Oedipus complex discussed by Freud, but can hardly be treated as identical with it. The “complexes” dealt with in this book are actually the points at which literary myth becomes focused on its cardinal points of creation, redemption and apocalypse.

In the earlier part of our cultural tradition the fire-world was most significantly the world of heavenly bodies between heaven proper and the earth. The Spirit descends from above in tongues of fire; the seraphim are angels of fire; the gods who preceded the angels are in charge of the planets; for Christianity the world of superior spirits is all that is left of the unfallen world that God originally planned. The fire-world as the unfallen world of pre-creation appears in Bachelard as the “Novalis complex.” The return of man to his original home, the complementary myth of ascending fire, is symbolized by the funeral pyre of Hercules (in the fourth section of Eliot’s “Little Gidding,” for example, this image is brought into direct contrast with the image of fire descending from the Holy Spirit), and comes into all the imagery of purgatorial fire in Dante and elsewhere. With the Romantics this more specifically human fire, which symbolizes the raising of the human state to a quasi-divine destiny, becomes more purely a “Prometheus complex,” especially to the more revolutionary Romantics, Shelley, Byron, Victor Hugo, who feel, like Ahab in Moby Dick, that the right form of fire-worship is defiance. The Last Judgment, the destruction of the world by fire and the absorption of the human soul into the soul of fire, is the “Empedocles complex.”

Thus the myth of “spontaneous combustion” is used by Dickens in Bleak House, to describe the death of Krook. In his preface Dickens stubbornly defends the actuality of the conception, and refers to some of the authorities quoted by Bachelard, including Le Cat. When Dickens finally says: “I shall not abandon the facts until there shall have been a considerable Spontaneous Combustion of the testimony on which human occurrences are usually received”—in other words the Last Judgment—we begin to get a clue to the real reason why Dickens felt that such a device was essential to his story. This is merely one example of the kind of expanding insight into literature which can take off from Bachelard’s witty and pungent study.

Northrop Frye
We have only to speak of an object to think that we are being objective. But, because we chose it in the first place, the object reveals more about us than we do about it. What we consider to be our fundamental ideas concerning the world are often indications of the immaturity of our minds. Sometimes we stand in wonder before a chosen object; we build up hypotheses and reveries; in this way we form convictions which have all the appearance of true knowledge. But the initial source is impure: the first impression is not a fundamental truth. In point of fact, scientific objectivity is possible only if one has broken first with the immediate object, if one has refused to yield to the seduction of the initial choice, if one has checked and contradicted the thoughts which arise from one's first observation. Any objective examination, when duly verified, refutes the results of the first contact with the object. To start with, everything must be called into question: sensation, common sense, usage however constant, even etymology, for words, which are made for singing and enchanting, rarely make contact with thought. Far from marvelling at the object, objective thought must treat it ironically. Without this malign vigilance we would
never adopt a truly objective attitude. When we are dealing with men, our equals and our brothers, our method should be based on sympathy. But when confronted with this inert world whose life is not ours, which suffers none of our sorrows not is exalted by any of our joys, we must restrain all our enthusiasm, we must repress our personal feelings. The axes of poetry and of science are opposed to one another from the outset. All that philosophy can hope to accomplish is to make poetry and science complementary, to unite them as two well-defined opposites. We must oppose, then, to the enthusiastic, poetic mind the taciturn, scientific mind, and for the scientific mind an attitude of preliminary antipathy is a healthy precaution.

We are going to study a problem that no one has managed to approach objectively, one in which the initial charm of the object is so strong that it still has the power to warp the minds of the clearest thinkers and to keep bringing them back to the poetic fold in which dreams replace thought and poems conceal theorems. This problem is the psychological problem posed by our convictions about fire. It seems to me so definitely psychological in nature that I do not hesitate to speak of a psychoanalysis of fire.

Contemporary science has almost completely neglected the truly primordial problem that the phenomena of fire pose for the untutored mind. In the course of time the chapters on fire in chemistry textbooks have become shorter and shorter. There are, indeed, a good many modern books on chemistry in which it is impossible to find any mention of flame or fire. Fire is no longer a reality for science. Fire, that striking immediate object, that object which imposes itself as a first choice ahead of many other phenomena, no longer offers any perspective for scientific investigation. It seems, then, that it would be instructive from a psychological point of view to trace the way in which this phenomenological value has become inflated and to study how a problem which had been a prime concern of scientific research for centuries was suddenly broken down into smaller problems or set aside without ever having been solved. When, as I have done on many occasions, one asks educated persons and even eminent scientists, "What is fire?", one receives vague or tautological answers which unconsciously repeat the most ancient and fanciful philosophical theories. The reason for this is that the question has fallen within a zone that is only partially objective, a zone in which personal intuitions and scientific experiments are intermingled. As a matter of fact, we shall demonstrate that our intuitions of fire—more perhaps than of any other phenomenon—are heavily charged with fallacies from the past. These intuitions lead us to form immediate convictions about a problem which really should be solved by strict measurement and experimentation.

In one of my early books, I attempted to describe, in connection with heat phenomena, a clearly-defined axis of scientific objectivization. Here I showed how geometry and algebra gradually contributed their abstract forms and principles so that experimentation might be canalized into a scientific path. It is now the other axis—no longer the axis of objectivization but that of subjectivity—that I would like to explore in order to illustrate the double perspectives that might be attached to all problems connected with the knowledge of any particular reality, even a well-defined reality. If we were correct in our theorizing about the real implication of subject and object then we should attempt to make a clearer distinction between the pensive man and the thinker, without, however, any real hope of ever being able to make an absolute distinction between them. In any case it is the pensive man whom we wish to study here, the man pensively seated by his fireplace in complete solitude at a time when the fire is burning brightly as if it were the very voice of this solitude. We shall have, then, many opportunities to show the dangers that first impressions, sympathetic attractions, and careless reveries hold for true scientific knowledge. We shall easily be able to observe the observer and so arrive at the principles underlying this value-laden or rather this hypnotized form of observation that is involved in gazing into a fire. Finally, this slightly hypnotized condition, that is surprisingly constant in all fire watchers, is highly conducive to psychoanalytical investigation. A winter's evening with the wind howl-
ing around the house and a bright fire within is all that is required to make the grieving soul give voice to its memories and sorrows:

It is the muted voice of the dying winter embers
Which enchants this heart of mine,
This heart which like the covered flame
Sings as it is consumed.

Toulet

But although this book is easy to write when we go about it line upon line, it seems to be quite impossible to give it a well-organized structure. To draw up a plan of human errors is an enterprise impossible of fulfillment. It is particularly difficult in the case of a task like ours, which cannot be treated on the historical plan because the conditions that led to reverie in the past have not been eliminated by contemporary scientific education. Even the scientist, when not practising his specialty, returns to the primitive scale of values. Thus it would be a vain undertaking to trace the historical development of a thought which has always run counter to the teachings of the history of science. Instead we shall devote part of our efforts to showing that reverie takes up the same primitive themes time and again and always operates as it would in primitive minds, and this in spite of the successes of systematic thought and even in face of the findings of scientific experiments.

Nor shall we situate our studies in a remote period in which it would be only too easy to illustrate the prevalence of fire worship. What appears, however, to be a worthwhile project is to establish the secret persistence of this idolatry of fire. Therefore the closer that the document we are using is to our own time the more forcefully will it demonstrate our thesis. Our aim will be to track down in historical records the permanent document that indicates a resistance to psychological evolution, that reveals the old man in the young child, the young child in the old man, the alchemist in the engineer. But since, for us, the past represents ignorance just as reverie represents futility, our aim will be as follows: to cure the mind of its happy illusions, to free it from the narcissism caused by the first contact with the object, to give it assurances other than mere possession, and powers of conviction other than mere warmth and enthusiasm, in short, to give the mind proofs that are not as unsubstantial as flames!

But we have already said enough to bring home to the reader the meaning of a psychoanalysis of the subjective convictions related to the knowledge of fire phenomena, or more briefly, of a psychoanalysis of fire. It will be by specific arguments that we shall make clear our general theses.

We would like, however, to add a further remark by way of warning. When our reader has finished reading this book he will in no way have increased his knowledge. This will not be entirely our fault, perhaps, but rather will be the price that must be paid for the method we have selected. When we turn inwards upon ourselves we turn aside from truth. When we carry out inner experiments, we inevitably contradict objective experiment. Again it must be repeated that in this book when we talk of our personal experiences we are demonstrating human errors. Our work is offered, then, as an example of that special psychoanalysis that we believe would form a useful basis for all objective studies. It is an illustration of the general theses put forward in our recent book, The Formation of the Scientific Mind (La Formation de l'esprit scientifique). The pedagogy of scientific instruction would be improved if we could demonstrate clearly how the fascination exerted by the object distors inductions. It would not be difficult to write about water, air, earth, salt, wine and blood in the same way that we have dealt with fire in this brief outline. To tell the truth, these substances which receive an immediate emotional value and lead objective research to the study of non-general themes are less clearly double—less clearly subjective and objective—than fire; but nevertheless they too bear a false stamp, the false weight of unquestioned values. It would be more difficult but also more fruitful to use psychoanalysis to examine the bases for certain other more rational, less immediate and hence less affective concepts than those attached to our experiences of substances. If we succeeded in inspiring any imitators, we should urge them to
study, from the same point of view as a psychoanalysis of objective knowledge, the notions of totality, of system, of element, evolution and development . . . One would have no trouble in discovering that underlying such notions is a system of heterogeneous values, indirect but of an undeniably affective nature. In all these examples one would find beneath the theories, more or less readily accepted by scientists and philosophers, convictions that are often quite ingenious. These unquestioned convictions are so many extraneous flashes that bedevil the proper illumination that the mind must build up in any project of the discursive reason. Everyone should seek to destroy within himself these blindly accepted convictions. Everyone must learn to escape from the rigidity of the mental habits formed by contact with familiar experiences. Everyone must destroy even more carefully than his phobias, his “philias,” his complacent acceptance of first intuitions.

To sum up, while we do not seek to instruct the reader, we should feel rewarded for our efforts if we can persuade him to practice an exercise at which we are a master: to laugh at oneself. No progress is possible in the acquisition of objective knowledge without this self-critical irony. Finally, it should be noted that we have cited only a very small portion of the documents that we have compiled in the course of our endless readings in the old scientific books of the seventeenth and eighteenth centuries. As a result, this short work is a mere outline of the subject. If it had been solely a question of recording stupid observations, it would have been only too easy to have written a large volume.
tolerance of common opinion which accepts the most flagrant contradictions nor the enthusiasm which accumulates, without proof, the most laudatory epithets, would be understandable. For example, what affection and what nonsense there is in this page written by a doctor at the end of the eighteenth century:

I mean by this fire not a violent, tumultuous, irritating and unnatural heat which burns instead of cooking the bodily humors just as it does the foods; but rather that gentle, moderate, aromatic fire which is accompanied by a certain humidity having an affinity with that of blood and which penetrates the heterogeneous humors as well as the nutritious juices, separates them, wears them down, polishes the roughness and bitterness of their several parts and finally brings them to such a degree of gentleness and refinement that they are now adapted to our nature.

In this page there is not a single argument, not a single epithet, which can be granted an objective meaning. And yet how convincing it is! To me it seems to combine the persuasive power of the doctor and the insinuating power of the remedy. Just as fire is the most insinuating of medicaments, so in extolling its virtues the doctor is at his most persuasive. In any case I never reread this page—let him who can explain this invincible association—without remembering the grave and kindly doctor with the gold watch who used to come to my bedside when I was a child and who would calm my worried mother with one learned word. It would be a winter's morning in our poor home. The fire would be shining in the hearth. They would give me syrup of Tolu. I can remember how I would lick the spoon. Where are they, those days filled with the warm smell of balsam and the hot aromas of the medicines?

When I was sick my father would light a fire in my room. He would take great care in arranging the logs over the kindling chips and in slipping the handful of shavings between the andirons. To fail to light the fire would have been incredibly stupid. I could not imagine my father having any equal in the performance of this function, which he would never allow anyone else to carry out. Indeed, I do not think I lit a fire myself before I was eighteen years old. It was only when I lived alone that I became master of my own hearth. But I still take special pride in the art of kindling that I learned from my father. I think I would rather fail to teach a good philosophy lesson than fail to light my morning fire. Thus how keenly sympathetic I am when I read in the work of a favorite author [Ducarla], who is usually occupied with scientific research, this page which to me is almost a page of personal memories:

I have often amused myself with this trick when I was out visiting or when I had company at home: the fire would die down; for a long time the others would poke at it knowingly through a thick cloud of smoke, but in vain. Finally they would resort to chips and coal which often did not arrive in time; after the logs had been turned over a good many times, I would succeed in getting hold of the fire tongs, a feat that requires patience, audacity and some luck. I would even call a halt to the festivities while I pretended to cast a spell, like the faith healers to whom the Faculty of Medicine turns over a patient whose life is despair of; then all I would do would be to put a few half-burned logs facing one another, often without those present noticing that I had touched anything. I would sit back, apparently without having done anything at all; they would look at me as if to tell me to get busy, and yet the flame would come and ley hold of the pile of logs; then they would accuse me of having thrown some kind of flash powder on it, and, in the end, would usually acknowledge that I had made the most of the draught; they did not go so far as to inquire into the complete, the effluent and the radiant kinds of heat, or into pyrospheres, translative speeds, and calorific series.

And Ducarla goes on to display both his domestic talents and his ambitious theoretical system of knowledge in which the propagation of fire is described as a geometric progression which follows "calorific series." In spite of this mathematical intrusion, the first principle of the "objective" thought of Ducarla is very evident, and its psychoanalysis is immediate: let us put glowing ember against glowing ember and the flame will come to brighten our hearth.
Perhaps the reader here can discern an example of the method that we propose to follow in our psychoanalysis of objective knowledge. It is really a question of finding how unconscious values affect the very basis of empirical and scientific knowledge. We must then show the mutual light which objective and social knowledge constantly sheds on subjective and personal knowledge, and vice versa. We must show in the scientific experiment traces of the experience of the child. Thus we shall be justified in speaking of an unconscious of the scientific mind—of the heterogeneous nature of certain concepts, and we shall see converging, in our study of any particular phenomenon, convictions that have been formed in the most varied fields.

For one thing, perhaps it has not been sufficiently noted that fire is more a social reality than a natural reality. To see the justification for this remark there is no need to go into lengthy considerations of the role of fire in primitive societies nor to insist on the technical difficulties involved in keeping a fire burning; all that is necessary is to practice some positive psychology by examining the structure and the education of a civilized mind. In point of fact, respect for fire is a respect that has been taught; it is not a natural respect. The reflex which makes us pull back our finger from the flame of a candle does not play any conscious role in our knowledge about fire. One may even be astonished that it has been accorded so much importance in textbooks on elementary psychology, where it is offered as the eternal example of the intervention of a sort of reflective thinking within the reflex, of a conscious thought in the midst of the most violent sensation. In reality the social prohibitions are the first. The natural experience comes only in second place to furnish a material proof which is unexpected and hence too obscure to establish an item of objective knowledge. The burn, that is to say the natural inhibition, by confirming the social interdictions, thereby only gives all the more value to the paternal intelligence in the child's eyes. Thus there is at the base of the child's knowledge of fire an interaction of the natural and the social in which the social is almost always dominant. Perhaps this can be seen better if we compare the pin-prick and the burn. They both cause reflexes. Why then are points not the object of respect and fear in the same way as fire? It is precisely because the social prohibitions concerning points are much weaker than the prohibitions concerning fire.

This, then, is the true basis for the respect shown to flame: if the child brings his hand close to the fire his father raps him over the knuckles with a ruler. Fire, then, can strike without having to burn. Whether this fire be flame or heat, lamp or stove, the parents' vigilance is the same. Thus fire is initially the object of a general prohibition; hence this conclusion: the social interdiction is our first general knowledge of fire. What we first learn about fire is that we must not touch it. As the child grows up, the prohibitions become intellectual rather than physical; the blow of the ruler is replaced by the angry voice; the angry voice by the recital of the dangers of fire, by the legends concerning fire from heaven. Thus the natural phenomenon is rapidly mixed in with complex and confused items of social experience which leave little room for the acquiring of an unprejudiced knowledge.

Consequently, since the prohibitions are primarily social interdictions, the problem of obtaining a personal knowledge of fire is the problem of clever disobedience. The child wishes to do what his father does, but far away from his father's presence, and so like a little Prometheus he steals some matches. He then heads for the fields where, in the hollow of a little valley, he and his companions build a secret fireplace that will keep them warm on the days when they decide to play truant from school. The city child has little acquaintance with the joys of the fire blazing up between three stones; he has not tasted the fried slob nor the snail that has been placed all slimy on the fiery embers. He may very well escape the Prometheus complex whose action I have often experienced. Only this complex enables us to understand the interest that is always aroused by the rather trite legend of the father of Fire. Moreover, one must not hasten to confuse this Prometheus complex with the Oedipus complex of classical psychoanalysis. Doubtless the sexual components of reveries
about fire are particularly intense, and we shall attempt in a later chapter to demonstrate this fact. Perhaps, however, it is better to designate all the shades of unconscious convictions by different formulas, until we can see later how the various complexes are related. As it happens, one of the advantages of the psychoanalysis of objective knowledge that we are proposing to carry out seems to be that we are examining a zone that is less deep than that in which the primitive instincts function; and it is because this zone is intermediary that it has a determinative action on clear thought, on scientific thought. To know facts and to make things are needs that we can characterize in themselves without necessarily having to relate them to the will to power. There is in man a veritable will to intellectuality. We underestimate the need to understand when we place it, as pragmatism and Bergsonism have done, under the absolute dependence of the principle of utility. We propose, then, to place together under the name of the Prometheus complex all those tendencies which impel us to know as much as our fathers, more than our fathers, as much as our teachers, more than our teachers. Now it is by handling the object, it is by perfecting our objective knowledge, that we can best hope to prove decisively that we have attained the intellectual level that we have so admired in our parents and in our teachers. The acquiring of supremacy through the drive of more powerful instincts naturally will appeal to a much greater number of individuals, but minds of a rarer stamp also must be examined by the psychologist. If pure intellectuality is exceptional, it is nonetheless very characteristic of a specifically human evolution. The Prometheus complex is the Oedipus complex of the life of the intellect.

Modern psychiatry has made clear the psychology of the pyromaniac. It has shown the sexual nature of his tendencies. On the other hand it has brought to light the serious traumatism that a psyche can suffer from the spectacle of a roof or haystack that has been set on fire, from the sight of the great blaze of fire shining against the night sky and extending out over the broad expanse of the ploughed fields. Almost always a case of incendiaryism in the country is the sign of the diseased mind of some shepherd. Like bearers of sinister torches, these men of low degree transmit from age to age the contagion of their lonely dreams. The sight of a fire will cause some man to become a pyromaniac almost as inevitably as a pyromaniac will some day start a fire. Fire smolders in a soul more surely than it does under ashes. The arsonist is the most dissembling of criminals. At the asylum of Saint-Ylie, the pyromaniac with the most marked tendencies is a very obliging fellow. There is only one thing that he claims he does not know how to do, that is to light the stove. Like psychiatry, classical psychoanalysis has long studied dreams about fire. They are among the clearest, the most dis-