CHAPTER THIRTEEN

The Roots of Science Fiction

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All fiction—every book even, fiction or not—takes us out of the world we normally inhabit. To enter a book is to live in another place. Out of the nature of this otherness and its relation to our life experiences come all our theories of interpretation and all our criteria of value. Previously, I argued the case for a particular relation between fiction and experience, expressed in temporal terms as "future-fiction." The polemical nature of my situation as advocate for a popular but critically deprecated form of fiction led me inevitably to make a case which is in certain respects too narrow for its subject. The laws of rhetoric force all radical advocates to choose between betraying their causes by an excess of conciliation or of hostility, and I understand those laws only too well. In compensation, I wish to be more tentative and speculative now, in describing the parameters of a fictional form that is both old and new, rooted in the past but distinctly modern, oriented to the future but not bounded by it.

It is customary in our empirically based Anglo-Saxon criticism to distinguish between two great schools of fiction according to the relationship between the fictional worlds they present and the world of human experience. Thus we have, since the eighteenth century, spoken of novels and romances, of realism and fantasy, and we have found the distinction useful enough at times, even though, because of our empirical

bias, we have tended to value realism more highly than romance. It will be appropriate, then, at least as a beginning, to see the tradition that leads to modern science fiction as a special case of romance, for this tradition always insists upon a radical discontinuity between its world and the world of ordinary human experience. In its simplest and most ancient form this discontinuity is objectified as another world, a different place—Heaven, Hell, Eden, Fairyland, Utopia, the Moon, Atlantis, Lilliput. This radical dislocation between the world of romance and the world of experience has been exploited in different ways. One way, the most obvious, has been to suspend the laws of nature in order to give more power to the laws of narrative, which are themselves projections of the human psyche in the form of enacted wishes and fears. These pure enactments are at the root of all narrative structures, and are themselves the defining characteristics of all narrative forms, whether found in "realistic" or "fantastic" matrices. In the sublimative narratives of pure romance they are merely more obvious than elsewhere because less disguised by other interests and qualities. But there is another way to exploit the radical discontinuity between the world of romance and that of experience, and this way emphasizes cognition. The difference can be used to get more vigorous purchase on certain aspects of that very reality which has been set aside in order to generate a romantic cosmos. When romance returns deliberately to confront reality it produces the various forms of didactic romance or fabulation that we usually call allegory, satire, fable, parable, and so on—to indicate our recognition that reality is being addressed indirectly through a patently fictional device.

Fabulation, then, is fiction that offers us a world clearly and radically discontinuous from the one we know, yet returns to confront that known world in some cognitive way. Traditionally, it has been a favorite vehicle for religious thinkers, precisely because religions have insisted that there is more to the world than meets the eye, that the common-sense view of reality—"realism"—is incomplete and therefore false. Science, of course, has been telling us much the same thing for several hundred years. The world we see and hear and feel—"reality" itself—is a fiction of our senses, and dependent on their focal ability, as the simplest microscope will easily demonstrate. Thus it is not surprising that what we call "science" fiction should employ the same narrative vehicle as the religious fictions of our past. In a sense, they are fellow travelers. But there are also great differences between these kinds, of fiction, which must be investigated.

There are two varieties of fabulation or didactic romance, which corresponds roughly to the distinction between romances of religion and romances of science. We may call these two forms "dogmatic" and "speculative" fabulation, respectively. This distinction is neither complete nor invidious. It represents a tendency rather than delineating a type, but most didactic romances are clearly dominated by one tendency or the other. Even within the Christian tradition, we can recognize Dante's *Commedia* as a dogmatic fabulation and More's *Utopia* as a speculative one. Dante's work is greater by most accepted standards of comparison. But it works out of a closed, anti-speculative system of belief. A *Utopia* admits in its title that it is nowhere. A *Commedia*, human or divine, on the other hand, must fill the known cosmos. As opposed to dogmatic narrative, speculative fabulation is a creature of humanism, associated from its origins with attitudes and values that have shaped the growth of science itself. Swift detested the science of his time, which drove him to dogmatic posturing in Book III of *Gulliver*. But surely without the microscope and telescope Books I and II could not have been as they are. And Book IV is a speculation beyond all dogma. Since Dante, dogmatic fabulation has declined, though it always lurks in the worlds of satire. Since More, speculative fabulation has grown and developed. Born of humanism it has been fostered by science. But it has never flourished as it does at present—for reasons that it is now our business to explore.

As Claudio Guillen has taught us, literature may be usefully seen as aspiring toward system—as a collection of entities constantly rearranging themselves in search of an equilibrium never achieved. In the course of this process certain generic forms crystallize and persist or fade from existence, and among these forms some come into dominance at particular moments of history, only to yield their dominant position with the passage of time. In every age, as the Russian Formalists were fond of observing, certain generic forms are regarded as "canonical"—the accepted forms for the production of serious literature—and other forms are considered outside the pale, being either too esoteric ("coterie literature") or too humble ("popular literature"). But with the passage of time canonical forms become rigid, heavy, mannered, and lose

their vital power. Even the dominant forms eventually give up their privileged position and move toward the edges of the literary canon. The reasons for this may be seen in purely formal terms—as the exhaustion of the expressive resources of the genre. Or they may be seen in broader cultural terms—as responses to social or conceptual developments outside the literary system itself. To my way of thinking, since fiction is a cognitive art it cannot be considered adequately in purely formal terms. Formal changes, to be understood, must be seen in the light of other changes in the human situation.

I propose, then, to examine a small—but important —part of the system of literature: the interaction of certain forms of fictional representation over a period of a few centuries, ending with the present time. And I further propose to see this interaction as an aspect of a larger movement of mind. My treatment will be extremely brief; the model I generate will be very sketchy. But in matters of this kind true persuasion is not to be achieved by the amassing of argumentative detail. I ask you simply to consider the fictional universe from the perspective of this model and then see if your old perspective can ever be comfortably assumed again. I will begin by raising a question seldom considered—perhaps because it is too large to admit of an answer. The question is, simply, "What makes a form dominant?" Admitting the phenomenon of dominance, why, for instance, should drama dominate the western countries of Europe for a hundred years from the late sixteenth through the seventeenth century? In general terms it has been argued, and I think convincingly, that drama was ideally suited to an era in which monolithic feudalism had lost its power over individual existence but bourgeois democracy had not yet come into being as a regulator of the power vacuum left behind by the crumbling feudal system. An age of princes (in the Machiavellian sense) made heroic drama conceivable as neither an earlier age of kings nor a later age of ministers ever could. The dramatic disposition of the age, with its incredible reversals of fortune, as seen, for instance, in the life of an Essex or a Ralegh, enabled a specific literary form to realize its maximum potential.

In the case of the novel, we find a form that came into dominance for parallel cultural reasons. The rise of the middle class did not "cause" the rise of the novel, but new concepts of the human situation enabled

both of these phenomena to take place. In particular, a new grasp of history, as a process with its own dynamics resulting from the interaction of social and economic forces, generated a new concept of man as a creature struggling against these impersonal entities. And this struggle could hardly be represented on the stage in the same way as man's struggle with fortune or his own ambitious desires. It is not that plays dealing with socio-economic man could not be written. Writers from Steele to Ibsen struggled manfully to generate a rich social canvas on stage. But what the novel achieved easily and naturally, the drama could do only with great pains and clumsy inadequacy. The novel naturally came to be the literary form in which an age conscious of history as a shaping force could express itself most satisfyingly. The novel was the diachronic form of a diachronic age. In each volume of the great nineteenth-century realists we find the history of an individual against a background of the forces shaping his moment of history. And in the sequences of novels produced by writers like Balzac and Zola we can see whole eras taking human shape, becoming protagonists struggling in the grip of the large designs of History itself. For this, of course, was the age in which History acquired a capital H, becoming a substitute for God, with a Grand Purpose in Mind, which His angel the Time-Spirit sought to effect.

Let us narrow the focus, now, to the narrative forms of representation only, for dominance can be considered not only among the great generic kinds, and even among whole arts, but also within the boundaries of a single kind of literature. In the novel itself we can trace the rise and fall from dominance of sentimental fiction in the eighteenth century, of a more sociological and historical fiction in the nineteenth, and finally a more inward and psychological fiction in the early twentieth century. All of these forms have gone under the name of realism, and as an evolving tradition this realism preserved a dominant place among the forms of fiction from the time of Defoe and Marivaux until well into the present century. Other fictional forms have coexisted with the dominant realism—such as the gothic, which first emerged in the late eighteenth century to fill an emotive gap opened in the system by the move of social and sentimental forms away from situations of heroic intensity. And after Swift a speculative fabulation with satirical tendencies was kept alive by writers like Johnson in *Rasselas* and Carlyle

in *Sartor Resartus*. But it is fair to say that this tradition lacked vigor and continuity—lacked generic certainty—until new conceptual developments put fictional speculation on an entirely different footing, changing the fabric of man's vision in ways that inevitably led to changes in his fiction.

This revolution in man's conception of himself was begun by Darwin's theory of evolution. It was continued by Einstein's theory of relativity. And it has been extended by developments in the study of human systems of perception, organization, and communication that range from the linguistic philosophy of Wittgenstein and the gestalt psychology of Kohler to the structural anthropology of Levi-Strauss and the cybernetics of Wiener. This century of cosmic rearrangement, crudely indicated here by this list of names and concepts, has led to new ways of understanding human time and space-time, as well as to a new sense of the relationship between human systems and the larger systems of the cosmos. In its broadest sense, this revolution, has replaced Historical Man with Structural Man.

Let us explore this great mental shift a bit. Darwin, and those who have continued his work, put human history in a frame of reference much grander than that of Historical Man. This stretched man's entire sense of time into a new shape and finally altered his familiar position in the cosmos. Early reactions to the evolutionary theory often tried to accommodate Darwinian evolutionary theory within the familiar dimensions of historical time, suggesting that some Superman lurked just around the evolutionary corner—in much the same way that people once believed the apocalypse to be scheduled for the very near future. But by expanding our sense of time the Darwinians reduced history to a moment and man to a bit player in a great unfinished narrative. The possibility of further evolution, with species more advanced than ourselves coming into being on this earth, displaced man from the final point of traditional cosmic teleology as effectively as Galileo had displaced man's planet from the center of the spatial cosmos. Thus Darwinian time, which has been continually extended with the discovery of new geological and archeological evidence, has had a profound effect on man's sense of himself and his possibilities. Historical time, then, is only a tiny fragment of human time, which is again a tiny fragment of geologic time, which is itself only a bit of cosmic time.

The theories of relativity have worked in a similar fashion to shake man out of his humanist perspective. By demonstrating that space and time are in a more intimate perspectival relation than we had known, Einstein too called history into question. When we think in terms of the cosmic distances and absolute velocities of the Einsteinian universe, not only do we lose our grasp on fundamental human concepts like "simultaneity" and "identity," we lose also our confidence in that common-sense apprehension of the world which replaced man's mythic consciousness as the novel replaced the epic in the hierarchy of narrative forms. And on the smaller scale of purely human studies in anthropology, psychology, and linguistics, ideas no less earthshaking have been developed. What does it do to our time sense to think of stone-age men living their timeless lives in the year 1974 in some remote jungle on our earth? And what does it do to our confidence in human progress when we see that though they lack all the things that our science and technology have given us, they live in a harmony with the cosmos that shames us, and know instinctively, it seems, lessons that we are painfully relearning by having to face the consequences of our ecological wantonness? At every turn we run into patterns of shaping forces that have gone unobserved by our instrumental approach to the world. We learn that men's visual perceptions are governed by mental leaps to whole configurations or "gestalts" rather than by patient accumulation of phenomenal details. We learn that we acquire language in similar quantum jumps of grammatical competence. And we know that our acquired languages in turn govern and shape our perceptions of this world. Finally, we have begun to perceive that our social systems and our linguistic systems share certain similarities of pattern, that even our most intimate forms of behavior are ordered by behavioral configurations beyond our perception and controlled through biological feedback systems that may be altered by the input of various drugs, hormones, and other biochemical messages.

In short, we are now so aware of the way that our lives are part of a patterned universe that we are free to speculate as never before. Where anything may be true—sometime, someplace—there can be no heresy. And where the patterns of the cosmos itself guide our thoughts so powerfully, so beautifully, we have nothing to fear but our own lack of courage. There are fields of force around us that even our finest instruments of thought

and perception are only beginning to detect. The job of fiction is to play in these fields. And in the past few decades fiction has begun to do just this, to dream new dreams, confident that there is no gate of ivory, only a gate of horn, and that all dreams are true. It is fiction—verbal narrative—that must take the lead in such dreaming, because even the new representational media that have been spawned in this age cannot begin to match the speculative agility and imaginative freedom of words. The camera can capture only what is found in front of it or made for it, but language is as swift as thought itself and can reach beyond what is, or seems, to what may or may not be, with the speed of a synapse. Until the mind can speak in its own tongueless images, the word will be its fleetest and most delicate instrument of communication. It is not strange, then, that the modern revolution in human thought should find expression in a transformation of a form of fictional speculation that has been available for centuries. It took only a quantum jump in fictional evolution for speculative fabulation to become structural, and the mutation took place sometime early in this century.

What, then, is structural fabulation? I shall begin to explore specific instances of this modern fictional form in my next lecture, but here it will be appropriate to sketch the parameters of the form in a general way, as a preparation for that discussion. Considered generically, structural fabulation is simply a new mutation in the tradition of speculative fiction. It is the tradition of More, Bacon, and Swift, as modified by new input from the physical and human sciences. Considered as an aspect of the whole system of contemporary fiction, it has grown in proportion to the decline of other fictional forms. For instance, to the extent that the dominant realistic novel has abandoned the pleasures of narrative movement for the cares of psychological and social analysis, a gap in the system has developed which a number of lesser forms have sought to fill. All the forms of adventure fiction, from western, to detective, to spy, to costume—have come into being in response to the movement of "serious" fiction away from plot and the pleasures of fictional sublimation. Because many human beings experience a psychological need for narration—whether cultural or biological in origin—the literary system must include works which answer to that need. But when the dominant canonical form fails to satisfy such a basic drive, the system becomes unbalanced. The result is that readers resort secretly and guiltily to lesser forms for that narrative fix they cannot do without. And many feel nearly as guilty about it as we could hope to make any habitual offender against our official mores. The spectacle (reported by George Moore, as I recollect) of W. B. Yeats explaining with great embarrassment why he happened to be reading a detective story can stand as a paradigm of the guilt felt by intellectuals whose emotional needs drive them to lesser literary forms for pleasure. We do call people "addicts" if they seem inordinately fond of detective stories, or even of science fiction. But the metaphor of addiction is a dangerously misleading one. For this is emotional food, not a mind-bending narcotic, that we are considering.

Thus the vacuum left by the movement of "serious" fiction away from storytelling has been filled by "popular" forms with few pretensions to any virtues beyond those of narrative excitement. But the very emptiness of these forms, as they are usually managed, has left another gap, for forms which supply readers' needs for narration without starving their needs for intellection. The "letdown" experienced after finishing many detective stories or adventure tales comes from a sense of time wasted—time in which we have deliberately suspended not merely our sense of disbelief but also far too many of our normal cognitive processes. And this letdown grows to a genuine and appropriate feeling of guilt to the extent that we *do* become addicted and indulge in the reading of such stories beyond our normal need for diversion and sublimation. Even food should not be taken in abnormal quantities, especially if much of it is empty calories. We require a fiction that satisfies our cognitive and sublimative needs together, just as we want food that tastes good and provides some nourishment. We need suspense with intellectual consequences, in which questions are raised as well as solved, and in which our minds are expanded even while focused on the complications of a fictional plot.

These may be described as our general requirements—needs which have existed as long as man has been sufficiently civilized to respond to a form that combines sublimation and cognition. But we also have to consider here the special requirements of our own age—our need for fictions which provide a sublimation relevant to the specific conditions of being in which we find ourselves. The most satisfying fictional response to these needs takes the form of what may be called structural

fabulation. In works of structural fabulation the tradition of speculative fiction is modified by an awareness of the nature of the universe as a system of systems, a structure of structures, and the insights of the past century of science are accepted as fictional points of departure. Yet structural fabulation is neither scientific in its methods nor a substitute for actual science. It is a fictional exploration of human situations made perceptible by the implications of recent science. Its favorite themes involve the impact of developments or revelations derived from the human or the physical sciences upon the people who must live with those revelations or developments.

In the previous era, historicist views of human culture led to a vision of man's future as guided by some plan beyond human comprehension, perhaps, in its totality, but solicitous of man and amenable to human cooperation. Thus great fictional narratives could be couched in terms of individual men and women seeking to align themselves with or struggle against the social forces through which history was working its will to achieve its idea. But now structuralism dominates our thought, with its view of human existence as a random happening in a world which is orderly in its laws but without plan or purpose. Thus man must learn to live within laws that have given him his being but offer him no purpose and promise him no triumph as a species. Man must make his own values, fitting his hopes and fears to a universe which has allowed him a place in its systematic working, but which cares only for the system itself and not for him. Man must create his future himself. History will not do it for him. And the steps he has already taken to modify the biosphere can be seen as limiting the future options of the human race. It is in this atmosphere that structural fabulation draws its breath, responding to these conditions of being, in the form of extrapolative narrative. The extrapolations may be bold and philosophical or cautious and sociological, but they must depart from what we know and consider what we have due cause to hope and fear. Like all speculative fabulations they will take their origin in some projected dislocation of our known existence, but their projections will be based on a contemporary apprehension of the biosphere as an ecosystem and the universe as a cosmosystem.

Obviously, not all works that are called "science fiction" meet this kind of standard. Many writers are so deficient in their understanding

of the cosmic structure itself that they have no sense of the difference between purposeful discontinuity and a magical relaxation of the cosmic structure. And many others seek to present traditional romance as if it had some structural or speculative significance. But, if a writer fails to understand the discontinuity on which his work is based *as* a discontinuity *from* a contemporary view of what is true or natural, he is powerless to make that discontinuity function structurally for us. Thus any cognitive thrust in his work will be accidental and intermittent. And if a writer transports men to Mars merely to tell a cowboy story, he produces not structural fabulation but star dreck—harmless, perhaps, but an abuse of that economy of means that governs mature esthetic satisfaction. Or if he allows such a variety of magical events that his fictional world seems deficient in its own natural laws, his work will fail structurally and cognitively, too, though it may retain some sublimative force. But in the most admirable of structural fabulations, a radical discontinuity between the fictional world and our own provides both the means of narrative suspense and of speculation. In the perfect structural fabulation, idea and story are so wedded as to afford us simultaneously the greatest pleasures that fiction provides: sublimation and cognition.

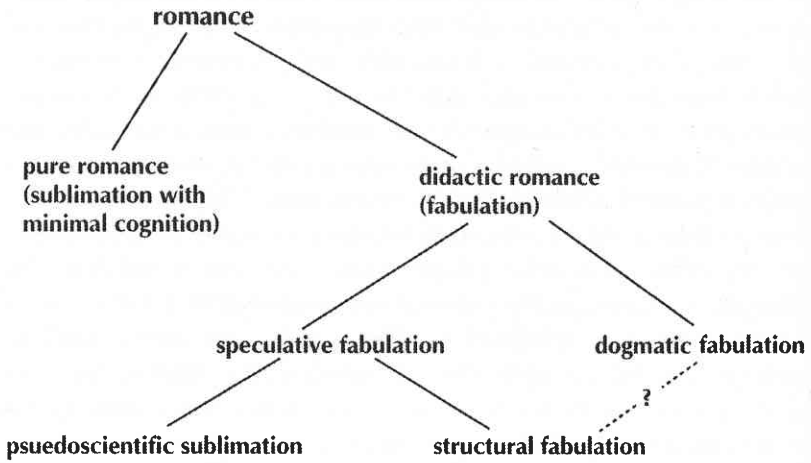
Afterword

Some tying together of things may be in order, here, though I would hesitate to seek a "conclusion" to a study necessarily so open ended as this one. First, a review of terminology may be useful. And second, some discussion of problems raised by this terminology itself and the concepts it attempts to signify. I have at times accepted the traditional Anglo-Saxon distinction between romance and realism, and have at times rejected it. This needs some clarification. The distinction itself was made by an empirically oriented race in an age of developing empiricism. Thus, it must have some value, if only a historical one. The distinction was originally and has been traditionally invidious, with realism being the privileged form. This suited a materialistic and positivistic age, and the science of that age seemed to lend support to a realistic notion of the cosmos. But science has become increasingly removed from the world of common sense, increasingly imaginative and "unrealistic" in its search for the true structure of the cosmos, and this

has ultimately strengthened the potential of didactic romance or fabulation as a form of cognitive fiction—thus striking at the roots of the very notion of "realism." That modern body of fictional works which we loosely designate "science fiction" either accepts or pretends to accept a cognitive responsibility to imagine what is not yet apparent or existent, and to examine this in some systematic way. The acceptance of this responsibility by a writer capable of measuring up to it leads to what I have called structural fabulation.

Seen in cultural terms, then, structural fabulation is a kind of narrative which is genuinely fictional but strongly-influenced by modern science. It is specifically romantic in that it breaks, consciously and deliberately, with what we know or accept to be the case. But it develops its arbitrary parameters with a rigor and consistency that imitates in its fictional way the rigor of scientific method. Seen in purely formal terms, structural fabulation is a development of a tradition of speculative fabulation that has a long history in Western culture. This tradition itself is rooted in the genre of didactic romance, and can be seen as a dialectical antithesis of dogmatic fabulation. This whole history can be seen in the diagram.

Perhaps the most crucial question or objection raised in the debates initiated by these lectures has involved the status of structural fabulation with respect to dogma. To some critics I have seemed to invoke a



new orthodoxy and to preach a new dogma called structuralism, thus establishing for structural fabulation a kind of religious sanction based on science. There is a certain amount of truth in this charge, and I have acknowledged this by the dotted line with the question mark in the diagram. Can speculation be evaluated for truth-value and still be speculative? Can we ask for rigor without insisting on dogma? Can we expect the imagination to be regulated by something unimaginative without stifling creativity itself? Great questions—with social as well as literary implications. And I have no easy answers for them. I hope and believe these questions can be answered in the affirmative. Partly because our science itself must be speculative in order to continue. And even more because fabulation is not a science. It does not ask "What is?" It asks "What if?" And by doing so it forces us to think about what is and what may be. The surge of pleasure we get when we begin to read any new work of science fiction comes through the lift off from our land of Is into the land of May Be. But the final joy of structural fabulation, as Ursula Le Guin shows us so beautifully in her new book, *The Dispossessed*, comes not from the departure, nor even from the trip itself, but from the return. As an aging dogmatist once said:

> We shall not cease from exploration
> And the end of all our exploring
> Will be to arrive where we started
> And know the place for the first time.