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Science Fiction and Language: Language
and the Imagination in Post War Science
Fiction.

By

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Science Fiction and Language: Language and the Imagination in Post-War Science Fiction.

Summary

This study examines the claims for a privileged status for the language of science fiction. The analysis of a series of invented languages, including 'nadsat', 'newspeak' and 'Babel-17', establishes that beneath these constructions lie deep-seated misconceptions about how language works. It is shown that the various theories of language, implicitly or explicitly expressed by writers and critics concerned with invented languages and neologism in science fiction, embody a mistaken view about the relation between language and the imagination. Chapter two demonstrates, with particular reference to the treatment of time and mind, that the themes on which science fiction most likes to dwell, reflect very closely the concerns of philosophy, and as such, are particularly amenable to the analytical methods of linguistic philosophy. This approach shows that what science fiction 'imagines' often turns out to be a product of the deceptive qualities of the grammar of language itself. The paradoxes of a pseudo-philosophical nature, in which science fiction invariably finds itself entangled, are particularly well exemplified in the work of Philip K. Dick. Chapter Three suggests that by exploiting the logically impossible, by making a virtue of the tricks and conventions which have become science fiction's stigmata (time-travel, telepathy, etc.), Dick indicates a means of overcoming the genre's current problems concerning form and seriousness. In conclusion it is demonstrated through the work of J. G. Ballard, that any attempt to throw off science fiction's 'pulp' conventions is likely to lead the genre further into the literary wilderness.

Science Fiction and Language: Language and the Imagination
in Post-War Science Fiction.

submitted by Ron Gallagher

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R.G.

INTRODUCTION

Doma's the fifth month. That was your first Martian word, Martha," Penrose told her. "The word for five. And if Davas is the word for metal, and Sornhulva is chemistry and/or physics, I'll bet Tadavas Sornhulva is literally translated as: 'Of-Metal-Matter-Knowledge.' Metallurgy, in other words. I wonder what Mastharnorvod means." It surprised her that, after so long and with so much happening in the meantime, he could remember that. "Something like 'Journal', or 'Review', or maybe 'Quarterly.'"¹

In this passage from H. Beam Piper's 1957 story 'Omnilingual', a group of archaeologists on Mars are attempting to read the Martian language. The Martian words above, consist of a "purely arbitrary but consistently pronounceable system of phonetic values for letters"² which Martha Dane, the archaeologist/linguist heroine, has grafted onto the symbols of Martian texts. Her first word, the word for month, was deduced from the title page of what she assumes to be a Martian magazine. Hence the assumption that the latter part of the header might be 'Journal' or 'Monthly'. Before one begins to point out how presumptuous such assumptions about Martian language and civilisation are, one must make a distinction between assumptions which are Piper's, and assumptions which are his characters'.

What we do know is that Martian civilisation died out fifty thousand years ago, that they were oxygen breathing bi-peds, that they had two sexes, lived in cities, used electricity, had universities and a highly advanced technology. Such assumptions as Piper has built in fit almost exactly those prescribed by C. F. Hockett in his essay 'How to Learn Martian'.

He outlines his optimistic case thus:

If there are Martians, and they are intelligent and have a language and if they do have upper respiratory and alimentary tracts shaped much like our own, and ears much like ours, and, finally, if they do make use of these organs in speech communication - given all these ifs, then the procedures of Ferdinand Edward Leonard will work, and he will be able to "break" the phonemic system of the language.³

Ferdinand Edward Leonard is Hockett's first Martian linguist, and the difficulties he outlines in the above essay apply to a living language. With a dead language one has to assume all the above. In Piper's tale, we are given no reason to believe that the long dead Martians were very different from human beings. In fact, the characters not only assume human characteristics in the Martians, but Western European characteristics in the language. Phonetic pronunciation, with pre-fixes, suffixes, nouns, verbs, qualifiers, and even a similar method of counting to our own, are assumed. If, however, the Martian language were constructed differently, along the lines of Chinese, for example, assigning phonetic values to its symbols would result in a linguistic disaster. The assumption that Martians count in a similar way to ourselves and name their 'years' and 'months' (what is a Martian month?) in such an apparently logical way is similarly preposterous.

To date, there have been several studies of the language of science fiction. The emphasis of many of these studies is on how the languages of science fiction measure up to the science of linguistics. Not surprisingly, as with the other sciences of science fiction, one generally finds a rag-bag of ill-informed and occasionally novel dramatisations of a garbled or crackpot theory. Until recently deriding the science in science fiction is what passed for criticism, which is unfortunate because, although I'm neither a linguist nor a physicist, building a faster-than-light drive seems as likely as deciphering an alien language.

Scientific implausibility is, I believe, to a greater or lesser extent, crucial to science fiction structuring. The implausibility of Piper's linguistics may be due either to his own shortcomings or those of the linguistics of 1957. His larger point, that the lack of a Rossetta stone, a bi-lingual, in the case of trying to decipher alien languages, might be offset in the case of an advanced civilisation, by a genuine universal such as the table of elements, is an interesting and contentious issue among linguists. The idea appeals to the universal nature of science. When the archeologists discover the table of elements on the wall of the Martian university, one of them remarks .

"That isn't just the Martian table of elements; that's the table of elements. It's the only one there is," Mort Trantor almost exploded. "Look, hydrogen has one proton and one electron. If it had more of either it wouldn't be hydrogen, it'd be something else. And the same with all the rest of the elements. And hydrogen on Mars is the same as hydrogen on Terra, or on Alpha Centauri, or in the next galaxy-"⁴

The conclusion of the story is that "physical science expresses universal facts; necessarily it is a universal language."⁵ As such 'Omnilingual' is a particular instance of science fiction attempting to talk about what it sees as the foundations, if not the limits of knowledge. What we consider to be the foundations of knowledge are continually being called into question by shifting world-views. The question of how subtly the assumptions underlying such world views are built into one's native language, whatever one's view on the matter, tends to draw the protagonists into an area which is properly the realm of philosophy.

What one defines as the 'realm' of philosophy has been increasingly unclear since the English philosophers, including Wittgenstein, redefined it earlier this century. The work of these philosophers is generally paraphrased as being concerned with 'the limits of what can be said', and that there are realms of philosophy and the imagination which will not, because of the grammar of language, admit articulation.

Science fiction, it would appear, routinely finds itself pushing up against these limits. By giving full rein to the imagination it would seem that science fiction, like philosophy, must stretch the limits of language, and advance into the realm of that which cannot be said.

This is all completely wrong. Wittgenstein could not be said to be concerned with the limits of what can be said, he was merely concerned with what can't be said. The distinction may seem trivial, but it is crucial. Wittgenstein's view of language is somewhat analogous to Einstein's view of the universe. It is finite but unbounded. This idea is only difficult because, in the case of Einstein's universe, part of the logic of a finite universe seems to be that there is something that is not the universe. This is the problem that Russell found himself entangled in when he formulated his so-called 'paradox'. In fact, Wittgenstein would say that it is only the 'grammar' of the word 'universe', or of Russell's 'class of classes', which lead one to look for the opposite or negative case. It is as nonsensical to look for things which one cannot say as it is to look for things which are not part of the universe.

Wittgenstein always held that what can be thought can be expressed and expressed clearly. He also believed that the puzzles and paradoxes of philosophy arose from a lack of clarity in an expression, or use of words. Science fiction, concerned as it is with cosmology, and the limits of the universe, knowledge and the mind, invariably finds itself tangling with such paradoxes. In my first chapter I examine a series of invented languages, and establish that beneath these constructions lie deep-seated misconceptions about how language works. The various theories of language, explicitly or implicitly expressed by writers and critics concerned with invented words and languages in science fiction, are a particular case of the capacity of language to mislead.

In my second chapter, I demonstrate with particular reference to the treatment of time and the mind, that the areas in which science fiction most likes to dwell are roughly identifiable with those of philosophy, and as such are particularly amenable to Wittgensteinian analysis. I show that in science fiction, the imagination does not hit its head on the linguistic ceiling, but wilfully imprisons itself within its accidents of structure. What science fiction often 'imagines' turns out to be the product of the deceptive qualities in the grammar of language.

In the third chapter, I show, through the work of Philip K. Dick, that by exploiting the logically impossible; by making a virtue of the tricks and conventions which have become science fiction's stigmata (time-travel, telepathy, etc.), the genre can pull free of the vicious circle in which it finds itself.

By grounding these conventions in concrete situations and imagining the consequences of these philosophical indiscretions in terms of human behaviour, Dick gives the reader a purchase on the relation between language, knowledge and the imagination.

In my final chapter, I suggest that the formlessness which science fiction currently languishes in is directly due to its attempts to throw off its 'pulp' conventions. Having indicated the importance of these conventions to the structuring of science fiction, I establish J. G. Ballard as what Vonnegut might term "the central figure of wrong-headedness" in any attempt to re-establish science fiction's credentials as the speakeasy of philosophy.

CHAPTER ONE

INVENTED LANGUAGES IN SCIENCE FICTION

Science fiction writers have always found the need to describe or represent the strange languages of their projected worlds. When Wells' Time Traveller first meets the Eloi he describes their speech as "a strange and very sweet and liquid tongue", he goes on to observe how they spoke in "soft, cooing notes to each other"¹. The reader is given little or no purchase on the Eloi's language outside these few remarks. The Time Traveller manages to establish the meaning of a few of their words, but in general converses with them in signs and gestures. With language, as with many other aspects of science fiction, Wells sets the pattern for the rest of the genre. Indeed, to be fair, this tendency to ignore or belittle the language problems encountered by adventurers in strange lands, and concentrate on more colourful pursuits, is a tradition long established by the travelogue. Jonathan Swift, Edgar Allen Poe and the majority of early science fiction writers sought to emulate this form in order to lend an air of authenticity to their fantastic adventures.

It seems probable that the limitations of the travelogue form precipitated science fiction into disguising itself in the far more fashionable form of the novel. The "realism and exhaustive presentation" of life, which Henry James saw as the objective of the 'The Novel', clearly cannot be achieved without the kind of minute

attention to dialogue which he saw as essential and Wells saw as time-consuming. These are the beginnings of a dispute about the importance of characterization, which continues to dog science fiction. In his study, The Language of 1984 W.F. Bolton remarks that one difference between 'real life' and fiction is,

In life the individual creates the discourse, but in fiction the discourse - including the dialogue - creates the character³.

The 'quarrel', as Edel and Ray call it, between James and Wells⁴ has, I believe, far reaching implications for those who would study science fiction, and I will return to this issue when I have established more fully the elements which comprise the argument.

Meanwhile, many critics have penetrated science fiction's disguise and accused it of a lack of characterization. Several explanations for this 'crucial' deficiency have been put forward. Briefly these explanations seek either to establish that the science fiction writer's concern is with ideas as opposed to character, or that the presentation of a depersonalized, unindividualistic society is a reflection of a social tendency which began with industrialisation and it is the science fiction writer's duty to represent. Scott Sanders, in his essay 'The Disappearance of Character', asserts,

in the twentieth century science fiction as a genre is centrally about the disappearance of character, in the same sense in which the eighteenth and nineteenth-century bourgeois novel is about the emergence of character⁵.

Sanders' account of the problem of characterization is fine in so far as it is an account of how science fiction depicts the loss of identity in over-regulated societies. Both Zamayatin's We and Orwell's Nineteen Eighty-Four address this issue overtly. In each

case the struggle against the enforced disintegration of identity is modulated through the character's own perceptions. The difference between this approach and that of much other science fiction which Sanders claims is about 'the disappearance of character', is that in the work of Asimov or Clarke, for example, the reader is hard pressed to find a character to disappear. It might be argued that this is a covert approach to the problem and that no attempt is made to establish character in the first place. However, if the reader is presented with character types, indistinguishable from one another, unashamed props for a shaky plot, the tendency is to put it down to incompetent writing rather than design.

Patrick Parrinder seeks a more fundamental reason for science fiction's failure to embody its characters more fully, and locates it in an inability or reluctance to "describe beings who do not share a common language with us"⁶. He continues,

While the central feature of alien intelligence is its possession of a different language, its peripheral features consist of a multitude of different sign-systems, including such things as physical characteristics, behaviour patterns and sexual roles, by which a Martian Ms Brown might be distinguished from her human counterpart⁷.

Thus an alien being, lacking the same physiological apparatus as ourselves might communicate with lightwaves, or smell, or even twitches of the antennae. Further, as in Aldiss's Dark Light Years, this being might behave in a manner that we would hesitate to call intelligent. Commenting on Stanislaw Lem's Solaris and The Invincible, Parrinder establishes anthropomorphism as a limiting factor when attempting to confront the 'utterly alien'.

Lem's novels do not go beyond the human viewpoint, and are thus the eloquent statements of an impasse. In order to bridge this impasse and adopt an alien viewpoint, it is necessary to offer some sort of verbal representation of alien language. This is normally done by subjecting the writer's own language to a controlled stylistic distortion⁸.

He relates such 'distortion' to the representation of dialect through phonetic spelling, and the use of archaic grammatical forms in historical fiction. His larger point is that

consideration of alien encounters involves the modification, rather than the wholesale abandonment, of the idea of rounded characterisation championed by Virginia Woolf and lately by Ursula LeGuin⁹.

Such a modification is likely to require a compromise on the part of the writer, and probably the critic as well.

Writing on LeGuin's Left-Hand of Darkness Parrinder remarks that the ending of the story relies on the validity of such archetypes as the father, the son, and the "fierce provincial boy". He continues

The artistic dilemma here is a genuine one, for it is almost impossible to evoke the archaic flavour of romance without at the same time reverting to other kinds of cultural conservatism that the writer might wish to avoid¹⁰.

The solution, however, is not to abandon traditional literary techniques and conventions, or to advocate the adoption of modernist narrative techniques. The fragmented forms of the 'New Wave' writers are not necessary, according to Parrinder, to cope with the depiction of new worlds and strange intelligences.

To avoid what he calls a 'Wittgensteinian impasse' he concludes "Man",

must find ways of speaking of that which is novel, and he does so by imitation and recombination of the modes of discourse already at his command. Science fiction provides a particular instance of this, building up its stories of the strange and new by instituting a dialogue with what we already know. In this complex construction that is the SF story we may find bound together . . . the elements of romance, fable, epic and parody¹¹.

Thus for 'SF' these stylistic and structural borrowings make the strange and new accessible to the reader by presenting it in familiar terms; by giving it an intelligible form. This, arguably, is the only way in which the "new thing" may be depicted, or understood.

Having invoked the spirit of Wittgenstein it is clear, that the problem with which we are dealing is not purely a stylistic one. The flight of science fiction writers to new and alien worlds seems to be constantly grounded by the limits of language. This, I believe, is what Parrinder has suggested in quoting the last line of Wittgenstein's Tractatus Logico-Philosophicus¹². The writings of Stanislaw Lem, he contends, "reveal a fascination with forms of 'intelligence' which are as little anthropomorphic as it is possible to be"¹³, an enthusiasm which is curtailed by the delimiting factor of language itself.

My partial objective in this present study is to dispel the notion that language in some way limits the expression of new ideas and concepts. What Wittgenstein shows in the Tractatus is that the limits of language and the limits of thought are so inextricably linked that it makes no sense to say that one limits the other. Jerzy Jerzowski notes in the work of Lem a balance between innovation in material and linguistic innovation,

the more daringly the author transgresses empirical plausibility, the more clearly he must fall back upon the literary convention of the story. Having freed his vision of the imaginary world from anthropocentrism and geocentrism, he must allow them in again through the back door¹⁴.

Gilbert Ryle would describe the idea that we could use words without presupposing reference to human behaviour, as a "category-mistake". To this extent the whole discussion of making the 'utterly alien' intelligible is a category-mistake¹⁵. Something 'utterly alien' is by definition unintelligible. This tendency of science fiction to proceed from premises which embody a category-error or in some way confront what is logically impossible, is to a greater or lesser extent the source of its narrative and stylistic ills. On a more mundane level, attempting to treat novelistically of alien beings and people of the future, given the kind of sleight of hand that requires regarding dialogue, is to take a commitment to formal realism to its extreme.

The language in this example from the beginning of Philip K. Dick's The Three Stigmata of Palmer Eldritch is typically tantalizing.

In the miserably high-number conapt building 492 on the outskirts of Marilyn Monroe, New Jersey, Richard Hnatt ate breakfast indifferently while, with something greater than indifference, he glanced over the morning homeopape's weather-syndrome readings of the previous day.

The Key glacier, Ol'Skintop, had retreated 4.62 Grables during the last twenty-four hour period. And the temperature, at noon in New York, had exceeded the previous day's by 1.46 Wagners. In addition the humidity, as the oceans evaporated, had increased by 16 Selkirks Hnatt pushed the 'pape away, and picked up the mail which had been delivered before dawn. it had been some time since mailmen crept out in daylight hours¹⁶.

It is something of a relief in this passage to find that we are on earth, in New Jersey, and that mailmen still come around. What a homeopape looks like, or what a Grable is, we can only guess. Nevertheless the passage is quite informative. Hnatt lives in an unattractive apartment somewhere in future New Jersey, and climactic changes, notably an increase in temperature, prevent people going out in the day. Later we find that Hnatt owes "ten and a half skins" on his apartment, we are invited to guess how or why skins (What sort of skins?) could ever come to be used instead of money. All through the passage Dick is trying to make his future world seem strange and new, whilst simultaneously keeping the narrative flow as smooth as possible. Note that by the second paragraph the homeopape has become a "pape". By the third paragraph "conapt" has become "apt". It is generally true that most of what is called linguistic innovation in science fiction is a variety of slang, or jargon. Some of the coinages tell us something about the projected world, some merely make it more mysterious. Anthony Burgess pushes this device to an extreme when he embodies the slang of his future world in a narrative that is largely first person.

A Clockwork Language: "Nadsat" and Riddley Walker

In A Clockwork Orange "Nadsat" is a kind of teenage argot patterned along the lines of cockney rhyming slang. Rhyming slang has its origins in the London underworld. Conversation in rhyming slang would theoretically only be intelligible to the criminal fraternity, thereby excluding police, bystanders, hangers-on etc.. "Nadsat" serves the same end for Alex and his "droogs" in the world of A Clockwork Orange, most of the vocabulary being concerned with food, drink, drugs, sex and crime. When A Clockwork Orange was first published, it was without a glossary of terms. Burgess leaves the reader to decipher "Nadsat" himself. This is a less formidable task than it first appears, chiefly because with "Nadsat" translation is merely substitution. Thus the following passage from the first page of A Clockwork Orange may easily be rendered in present day usage.

Our pockets were full of deng, so there was no real need from the point of view of crasting any more pretty polly to tolchock some old veck in an alley and viddy him swim in his blood while we counted the takings and divided by four, nor to do the ultra-violent on some shivering starry grey-haired ptitsa in a shop and go smecking off with the till's guts.¹⁷

Our pockets were full of money, so there was no real need from the point of view of stealing any more money to knock over some old man in an alley and watch him swim in his blood while we counted the takings and divided by four, nor to do the ultra-violent on some shivering ancient grey-haired 'chick' in a shop and go laughing off with the till's guts.

However I could have chosen to render the passage in rhyming slang which would, arguably, have been more true to the piece taken in its fictional context. I might even have translated it into French. The status of these versions of the original passage vis-a-vis meaning is a curious one. Indeed the notion that all these passages have the same 'meaning', the very fact translation is possible at all, is at the heart of the confusion over the referential nature of language. The various translations of a passage may appear to have approximately the same meaning or sense, the illusion is therefore fostered that the words refer to something, a ghostly something, a concatenation of objects and actions. Meaning thereby is reduced to something like an object of thought. Getting rid of this ghostly 'object of thought' clearly involves changing deeply seated attitudes toward language, and the overhaul or complete demolition of current models of how meaning arises. If then my rendering of the passage does not have the same meaning as the original, what exactly is its relationship? In the above passage I have substituted words in current English usage for Nadsat words. This substitution is only possible because with Nadsat, as with any slang, there is no significant deviation from the grammar and syntax of the dialect within which the slang operates. The meaning of individual words such as "deng" and "veck" is easily inferred from the syntax and context. More difficult words such as "brosay" or "smeck" may easily be deciphered by anyone with a knowledge of phrase-book Russian.

By using Russian as the model for his Nadsat vocabulary, Burgess implies the extent of Russian influence on his future Britain. But implication is all it ever is. Such an influence is never explicitly mentioned in the text. However, in discussing the role of Nadsat, the inference of Russian influence may be entered as an element contributing to the meaning arising from the book as a whole.

Thus the role of a word is defined by its relation to the other words in the sentence, and the piece as a whole. And although in principle the words "devotchka", "chick" and "girl" are interchangeable they serve different roles in the context of the piece. More importantly one could get no closer to discerning these shades of meaning by examining the object of the word, in this case a girl, and in trying to ascertain what Alex means when he used the word we can only look at Alex's other statements. When reading A Clockwork Orange the temptation is, at first, to stop at every strange word and see what its translation is, however, towards the end of the book I was not conscious of making English substitutions for Nadsat words such as "malenky", "litso", "droog", "gulliver" etc.... I was moreover prepared to guess at the meaning of other words if I thought their precise translation was not critical. When Alex says his "mum had laid out" a "malenky bit of supper - a couple of lomticks of tinned sponge-meat with a shive or so of kleb and butter, a glass of the old cold moloko¹⁸." we know what Alex is talking about without being able to form a precise picture.

This, as Bolton notes, is a characteristic of slang

'Function words' like articles, conjunctions, pronouns, prepositions, and other grammatical words such as parts of 'to be', are all perfectly standard, as is their arrangement in the sentence. Those properties of language, essential to intelligibility, are, unlike slang, very slow to change²².

These function words are essential to intelligibility, but they do not guarantee it.

It would be possible to increase the incidence of slang words in A Clockwork Orange. The last sentence of paragraph one, chapter one, might be rendered thus: -

Or you peet moloko with noshes in it, as we used to skazat and this would sharpen you up and make you ready for a lomtick of grahzny twenty-to-one, and that was what were peeting this evening I'm nachinating the raskazz with.

It is easy to see why Burgess did not take this more extreme option. A balance must be maintained between the intelligible and the barely intelligible. The author wants his reader to work without having to be a code breaker. This principle of balance we may see as a recurring and decisive factor in the construction of languages in science fiction.

Burgess's chief concern is to establish the vitality of his narrator Alex. The language of A Clockwork Orange achieves this through "linguistic exhibitionism" (as Burgess calls it)²³. The reader ought to feel genuine pathos when Alex is subjected to the horrors of aversion therapy; when the agents of the state seek to mechanize him.

The suggestion at the end of the book is that even as the plaything of political forces which he does not understand, Alex still has freedom of choice, he is not a conditioned thing. He is free once again to rape and terrorise and listen to Beethoven. Punishment, as far as Burgess is concerned, is one thing, aversion therapy quite another. Indeed the book is no more than a condemnation of aversion therapy, or rather, negative conditioning. The only metaphor which the book extends is its title. By default almost, the character of Alex rises from the obfuscation of Nadsat. In the sense that Burgess has failed to integrate the language with essential elements of the plot, it is a failed experiment. I suspect that the choice of Russian as a source for Nadsat is little more than an excuse for a sideswipe at communism.

Given that Burgess has deviated from the Wellsian pattern and made the attempt to dramatise the language of his future world, his contribution to raising the language consciousness of science fiction writers deserves recognition. Walter E. Meyers in his essay 'The Future History and Development of the English Language'²⁴ and his subsequent book Aliens and Linguists,²⁵ testifies to an appalling lack of attention to linguistic matters throughout the whole of science fiction. This is all the more surprising considering that science fiction frequently deals with the confrontation of differing language communities (so-called 'first contact' stories) and have "communication in general and language in particular as their central concern"²⁶.

Meyers, whilst agreeing with C. F. Hockett that science fiction writers have been slow to assimilate linguistics to all the other sciences they purport to have knowledge of, is not particularly critical of their slipshod attempts. Indeed, the scientific accuracy often demanded and rarely achieved, is likely to remain outside the scope of science fiction as long as criticism fails to encourage it. The lack of formal integrity in Riddley Walker, for example, belies the critical and popular acclaim which the book has received. The plot (by now a cliché) concerns how in a post-holocaust society, the remnants of our civilisation, technology and language, are transformed into the myths and legends of that future society. In Chapter 6 the "Eusa Story" is told. This sample of text describes the war which wiped out the technological civilization which we are encouraged to believe was the culmination of our own.

Eusa had thay Nos.uv thay Master Chaynjis. He run them thru the Power Ring he mayd the 1 Big 1. Eusa put the 1 Big 1 in barms then him & Mr Cleuver droppit so much thay kilt as meene uv thear oan as thay kilt enemies. Thay wun the Warr but the lan wuv poyzen from it the ayr & water as wel²⁷

This is less like science fiction than a Benny Hill sketch. If the passage is read aloud it sounds like nothing more than stage yokel. A writer's idea of how a country bumpkin might speak. The "1 Big 1" refers to the holocaust, the atomic bomb. Eusa is a combination of St. Eustace and the inventor of the bomb. Apart from some rather uninventive coinages the unsuspecting reader is the victim of nothing more than systematic mis-spelling.

Riddley Walker is about the rediscovery of gunpowder 2,000 years after the holocaust. The plot unfolds through the protagonist, Riddley Walker, walking backwards through the game of chinese-whispers which Hoban has constructed. The net effect of Hoban's mysticism, obfuscation and phonetic spelling, is frustration. Tales of post-holocaust societies are common enough. Walter M. Miller's Canticle for Leibowitz²⁸ being the most notable in the manner in which it deals with the interpretation of the language of technology by the new scholars. Miller tells a tale of the rediscovery of electricity and the eventual rebuilding of technological society with intelligence and humour. Hoban takes Miller's basic plot and overlays it with mysticism and pointless mis-spelling. I have not cited Hoban's book merely to declare it a futile exercise in word play. On the contrary Riddley Walker exemplifies a method in the construction of a future language, which, through its sheer banality brings into sharp relief the distinction between sense and nonsense, innovation and novelty, in the invention of languages.

In the case of both Burgess and Hoban considerable energy has been invested in representing speech of the future. The misreading of ancient texts which is essential to Riddley Walker's effect is given the lie by the ease with which its thinly disguised English can be read. We might ask why the protagonists have so much trouble understanding these old texts when their language is so similar in pronunciation to present day language. Thus the language of the book, far from being integral to the metaphor is counterproductive to it.

By jumping so rapidly from what I have called the Wellsian approach to languages, to the thoroughgoing dramatisations of Burgess and Hoban, I have avoided the complexities of Parrinder's middle-ground. Note, however, that the worlds of Riddley Walker and Clockwork Orange are not particularly strange to us. The reader is not startled by the impossible, the paradoxical, or anything conceptually difficult at all. The language merely adds spice to a dreary piece of future fiction. What appears to be formal innovation is not particularly innovative, and importantly does not reflect conceptual innovation.

Given that linguistic innovation does not entail new ideas, is the reverse also true? The temptation is to think that science fiction, in trying to describe the 'new thing' often falls short through linguistic necessity. Wittgenstein however would disagree. In his preface to the Tractatus he remarks "what can be said can be said clearly", later he says

When an answer cannot be put into words, neither can be the question be put into words.
The riddle does not exist.
If a question can be framed at all, it is also possible to answer it²⁹.

If we must draw a limit to the expression of thought that limit must be drawn in language "on the other side of the limit will simply be nonsense"³⁰. It is important not to think of language and thought as if they were related by some kind of correspondence, or even a casual connection. Only then is it possible to discuss new words, ideas and objects without having to worry about whether the tail is wagging the dog.

One of science fiction's set pieces is to posit a situation where someone or something possesses a sense which we do not have. Wells in, 'The Country of the Blind', imagines the reverse situation. The people in the valley in which his traveller, Nunez, is stranded, have been blind for so many generations that they no longer have the vocabulary or concepts to grasp what sight is. Instead of becoming their ruler as he had expected, the traveller, in his attempts to convince the blind people of his superiority, is merely branded an idiot and a madman.

Even the girl with whom he falls in love treats his talk of sight as "the most poetical of fancies"³¹. The important point of this story is not that they can't understand his speech, or lack the concept of sight, what matters is that he is unable to demonstrate that this wonderful extra sense gives him any advantage over the blind people, or enables him to do things better or more quickly. If he had been able to demonstrate that sight enabled him to plough a field more quickly or some such thing, it might have set the blind people thinking that sight would indeed be a desirable thing even though they have no idea what it entails. In such a situation we can imagine the word entering their vocabulary without their ever 'understanding' what light or colour are. In the context of the story however, although Nunez speaks the truth, what he says is nonsense. The people of the village have no use for his visions. What he says is nonsense precisely because what he says does not materially affect their behaviour. We can see here that it is not only difficult to discern the difference between sense and nonsense, but it has nothing to do with what is true³².

Nunez is a little like our archetypal science fiction writer, attempting to evoke awe and wonder at his feats of imagination; using strange words and strange concepts. Even if there are philosophical and scientific truths embodied in these "poetical fancies", convincing the reader of this requires more than veracity. At some stages in this study it might appear that I, like the medicine man in 'The Country of the Blind', advocate the putting out of the visionaries eyes. In fact I have no wish to censure science fiction for lack of scientific accuracy or for tendencies toward fantasy. What I do hope to show is that the chosen themes of science fiction are likely to lead it, like Nunez, into areas where language creates conceptual tangles rather than resolves them.

Wells amply demonstrates in a story containing almost no neologisms, that where language is concerned the mundane can often serve better than the flamboyant. Nevertheless the story of twentieth century literature is largely given over to style wars, and James Joyce the voice that launched a thousand books.

Theories at the Bottom of the Jargon: Science Fiction and Realism

Joyce's pre-occupation with technique throughout his life was a restless dissatisfaction with modes of representation which proved inadequate to the task of presenting the world as he saw it. Roger Fowler in Linguistics and the Novel writes,

Joyce articulates the thoughts of Leopold Bloom in an artificially constructed language which, by convention, has come to be accepted as the representation of a fragmented unfocused consciousness of that sort³³.

Joyce, with Ulysses, employed a technique which, much in the way a coined word passes into the language, has passed into the syntactic tool box of the modern writer. In fact as Fowler suggests, Joyce's method of representing consciousness has become a convention.

When Joyce presents Bloom's consciousness, he is making a statement on the possibility of knowing more intimately, more intimately than Henry James would admit, the mind of an individual. Joyce's technique articulates a view of Bloom which cannot be checked off against an objective phenomenon in the 'real' world. His innovation is to represent a relationship; to dramatize a fictional relationship with a character, in a manner which extends the limit of fiction. Joyce's mode of representation determines point of view, proximity, texture of thought etc... It may seem blasphemous now to make a form/content distinction by observing that although Joyce's subject matter, (that is the forms of human behaviour with which he is concerned) was in many ways new, daring even, it is the very familiarity of the setting and the relationships of the characters to each other which has caused his technical innovations to be so well received.

Lotman argues a similar point, suggesting that paradigmatic conservatism varies in inverse proportion to syntagmatic innovation. If this is true it bodes ill for science fictional stylistics. The "cognitive estrangement"³⁴ as Suvin describes it, apparently so essential to science fiction, would seem to preclude striking this balance.

A commitment to novelty, "the new thing", as Parrinder calls it, is likely to encourage narrative conservatism if the science fiction text wishes to conform to the requirements of what Ian Watt calls "formal realism".

Science Fiction, considered in the light of Watt's definition of "formal realism", is a strong candidate for the ideal form of the novel. Watt sees the novel as the literary form which "most fully reflects (the) individualistic and innovating reorientation"³⁵ which characterises the philosophical realism of the early eighteenth century. He continues: -

The novel is thus the logical literary vehicle of a culture which, in the last few centuries, has set an unprecedented value on originality, on the novel, and it is therefore well named³⁶.

Although the life portrayed in science fiction is often fantastic, its "realism", any novel's realism as Watt observes, "does not reside in the kind of life it presents, but in the way it presents it". The technique of "formal realism" is the pretence that language is being used in an ordinary way.

Linguistic innovation is thrust upon the science fiction writer. He must innovate language as surely as he must update the technology of his future world. He must spice his language with neologism as he decorates his new worlds with new gadgets. As we have seen the neologisms of science fiction disturb the reader whilst simultaneously trying to make him feel comfortable in the scenario. The same is arguably true of metaphor.

Watt counterpoises metaphorical or poetical language against what he sees as the distinctive "realist" narrative mode of the novel. He enumerates various technical characteristics of the novel emphasising how

(they) all seem to contribute to the furthering of an aim which the novelist shares with the philosopher - the production of what purports to be an authentic account of the actual experience of individuals. This aim involves many other departures from the traditions of fiction besides those already mentioned. What is perhaps the most important of these, the adoption of a prose style to give an air of complete authenticity, is also closely related to one of the distinctive methodological emphases of philosophical realism³⁷.

In Watt's view the novel is concerned with essentially new experiences as opposed to universals or absolutes; with particularities rather than generalities; and because the individual only has identity through consciousness in a particular time and place, the background of the novel would seem to require solid referents in the real world. Watt compares the reader of a novel to the member of a jury in a court of law; the reader assesses the novel as if it were evidence, as if it were a report on human life.

The narrative method whereby the novel embodies this circumstantial view of life may be called its formal realism; formal because the term realism here does not refer to any special literary doctrine or purpose, but only to a set of narrative procedures which are so commonly found together in the novel, and so rarely in other literary genres, that they may be regarded as typical of the form itself. Formal realism, in fact, is the narrative embodiment the premise, or primary convention, that the novel is a full and authentic report of human experience, and is therefore under an obligation to satisfy its reader with such details of the story as the individuality of the actors concerned, the particulars of the times and places of their actions, details which are presented through a more largely referential use of language than is common in other literary forms³⁸.

Watt sees the poverty of the novel's formal conventions as the price it must pay for its realism. Because it is not possible to isolate any particular style which will distinguish a fictional from a non-fictional text, the technique of formal realism is dependent on the author's intention, not to deceive, but to pretend to refer to people and recount events. According to Watt when reading such a text "blind", as it were, it would not always be possible to ascertain whether people and places referred to had referents in the real world or were part of the pretence of the author. It is a feature of formal realism that, as John Searle writes,

the author will refer to real places and events inter-mingling these references with the fictional references, thus making it possible to treat the fictional story as an extension of our existing knowledge³⁹.

Searle is here saying that the fact that the fictional and non-fictional are treated alike, that they are linguistically indistinguishable, is a crucial factor in the coherence of a piece of fiction. Implicit in this statement is the erroneous assumption that fiction can be mistaken for the non-fictional; that one could pick up a novel, for example, and believe that it was an accurate transcription of events. In fact, as Kenner points out in Joyce's Voices⁴⁰, every era has its literary and artistic styles, which although often invisible at the time, given a little distance, temporal or cultural, can be discerned quite clearly. Given a single page of text one would in most cases not only be able to distinguish whether it was fiction or non-fiction, one would in all likelihood be able to determine when it was written within a 30 year window.

Searle cannot seriously be saying that he confuses fiction and non-fiction, hence his argument is a discourse on the nature and importance of reference.

In Expression and Meaning Searle attempts to establish 'The Logical Status of Fictional Discourse' within his larger theory of speech acts (or illocutionary acts as he prefers to term them). Searle classifies speech acts into five basic categories. The class which we are here most interested in is the "assertive" class. This class includes "statements, assertions, descriptions, and characterisations" all of which Searle sees as characterising a work of fiction. In his view there is no such "illocutionary act" as writing a novel; the author of a work of fiction "pretends to perform a series of illocutionary acts, normally of the assertive type."⁴¹

The rules which establish these "utterances" as assertions, he calls, "vertical rules that establish connections between language and reality". What makes fiction possible, he suggests, is a set of "horizontal conventions" which are extralinguistic and non-semantic, and "break the connection between the words and the world established by the vertical rules". Without changing the meanings of the words this set of horizontal conventions suspends

the normal operation of the rules relating illocutionary acts to the world. In this sense, to use Wittgenstein's jargon, telling stories is really a separate language game; to be played it requires a separate set of conventions, though these conventions are not meaning rules; and the language game is not on all fours with illocutionary language games, but is parasitic on them⁴².

Searle's position is therefore that the meaning which emerges from fictional discourse is essentially the same as that of "serious" or non-fictional discourse, but of a lower order because the assertions are only pretended. The intermingling of the two forms of discourse, which he suggests makes it possible "to treat the fictional story as an extension of our existing knowledge", seems in this model to be dependant on the closeness with which the pretended assertion approximates a real assertion.

The criteria for such closeness in turn depends on a "background of assumptions and practices which are not themselves represented as part of the literal meaning"⁴³. Searle is arguing that the coherence of a work of "naturalist" fiction depends on the intermingling of fictional and non-fictional discourse made possible through the extralinguistic "assumptions" which they share.

Because the 'intermingling' of the fictional and non-fictional seems to threaten the operation of his vertical rules, Searle, in the tradition of Frege and Strawson states the following axiom,

1. Whatever is referred to must exist⁴⁴.

this first postulate of existence being the foundation of the axiom of identity and Searle's own axiom of "identification". Existence here does not exclude fictional characters because,

One can refer to them as fictional characters precisely because they do exist in fiction.⁴⁵

and he continues,

To make this clear we need to distinguish normal real world talk from parasitic forms of discourse such as fiction, play acting etc.... 46

and

I should emphasise that my account of parasitic forms of discourse does not involve the view that there are any changes in the meanings of words or other linguistic elements in fictional discourse. If we think of the meaning conventions of linguistic elements as being (at least in part) vertical conventions, tying sentences to the world, then it is best to think of the tacit conventions of fictional discourse as being lateral or horizontal conventions lifting, as it were, the discourse away from the world. But it is essential to realise that even in "Little Red Riding Hood", "red" means red.⁴⁷

Consistent with the theory of illocutionary acts, the words "hood", "riding", and "little" must also have their "normal" meaning. Yet when combined in the sentence "Little Red Riding Hood was walking through the forest one day.", they have not the status of a 'real' illocutionary act because the assertion is 'pretended'. If however I said, "One day Little Red Riding Hood was walking through Epping Forest.", I would be pretending to refer to Little Red Riding Hood (a fictional character whom I have created), and actually referring to the real Epping Forest. However, the assertion as a whole is only pretended, although grammatically it follows the convention of a real assertion.

Searle's method of procedure might be described as "rearguard action", he takes up a clearly indefensible position, and though fighting fiercely, concedes, (with exceptions to rules he has established and a wealth of footnotes,) so much ground that, when one appears to have won the argument one wonders exactly what he was defending.

Such is his argument concerning fictional reference. He appends a footnote to his axiom of existence, as follows,

"Exist" has to be construed tenselessly. One can refer to what has existed or what will exist as well as to what now exists⁴⁸.

This is one of Searle's more remarkable footnotes. Aside from its implications for philosophy as a whole, it obviates or negates a great deal of Searle's own argument concerning fiction. Given that it is possible to create any fiction situation or character that the imagination will allow, Searle's footnote renders it impossible to "fail of reference", when we talk of things fictional. Thus references to Napoleon, Mrs. Sherlock Holmes, and little green men are all equally admissible.

Despite such magnanimity, he asserts that the language of science fiction, perhaps because a story set in another world raises questions about background assumptions, is not so straightforwardly parasitic in its operation as naturalistic fiction. Thus Searle remarks,

What counts as coherence in the world of science fiction will not count as coherence in a work of naturalism. What counts as coherence will be in part a function of the contract between author and reader about the horizontal conventions⁴⁹.

This view directly contradicts Searle's previous statement that the horizontal conventions "do not alter or change the meanings of any words of other elements of the language"; because in science fiction words and their meanings are altered. Science fiction gives words new uses, it invents words and as we have seen, may even propose new languages.

The extension of language in this way is just one aspect of how fiction and literature as a whole extend the ordinary limits of language and contribute to linguistic change. In failing to take account of the importance of fiction in promoting linguistic change, Searle's account of "the status of fictional discourse", is inadequate, not only to science fiction but to literature as a whole.

If a particular science fiction story presents a new concept and gives it a name, in order to be able to use that name, a setting and a series of relationships dictating its use must be established. The reader learns through the course of the story the use, and therefore the meaning of the new word. The reading of a piece of science fiction is thereby, in some ways, analogous to the learning of a language. This is crucial, because even the simplest works of science fiction invariably involve the reader in the learning of new words or new uses for words.

Marc Angenot in his essay 'The Absent Paradigm' comments that

SF has, little by little, created its own vocabulary which is to a large degree used in common by different writers and has penetrated everyday language: android, cyborg, robotics, chronolysis. It is quite possible that such words as airship, aeronautics, cosmonaut, and television were first employed in fiction and only later entered common usage⁵⁰.

Samuel Delany likewise notes that a member of the editorial board of The Oxford Unabridged Dictionary of the English Language (sic) has testified that

science fiction is the most fertile area of writing in the production of new words which endure in the language - a position held up to the mid-thirties by poetry⁵¹.

The above observations suggest a special status for the language of science fiction. Delany in an appendix to his novel Triton writes,

science fiction is science fiction because various bits of technological discourse (real, speculative, or pseudo) - that is to say the 'science' - are used to redeem various other sentences from the merely metaphorical, or even the meaningless, for denotative description/presentation of incident.

Such sentences as "His world exploded", or "She turned on her left side," as they assume the proper technological discourse (of economics and cosmology in one; of switching circuitry and prosthetic surgery in the other) leave the banality of the emotionally fuzzy metaphor, abandon the triviality of insomniac tossings, and through the labyrinth of technical possibility, become possible images of the impossible⁵².

Delany is suggesting that rather than construe a phrase like "his world exploded", or "she looked straight through him" as metaphorical, in science fiction one might give them a literal interpretation. Someone's planet might blow up or a girl might see through someone's body. This "extending of semantic possibilities", because it presents the metaphor as "real", Peter S. Alterman has called "the concretizing of a metaphor"⁵³.

In his essay Delany suggests that the semantic possibilities for speculative fiction are not only more numerous, but also "richer" than those of naturalistic fiction or mundane fiction (MF). Patrick Parrinder responds that he "suspects" that "what Delany wishes to argue is that SF is capable of generating more thoroughly "writerly" texts (to use Barthes's term) than is realism"⁵⁴. Parrinder attributes Delany's comments to a certain overzealousness on behalf of the "SF fraternity".

Delany's contention that meaningful SF is necessarily more "plurivalent" than MF seems to assume that MF both posits and relies on automatic agreement between its writers, narrators, characters and readers as to the location of the "empirical world". Not only does all fiction rest on some degree of conflict about the nature of the world (even if it is only the conflict between the man slipping on the banana skin and the spectator), but a great deal of modern fiction has been devoted to exploding the myth that such conflicts can eventually be resolved. In a novelist like Virginia Woolf, the "mundane", is only the lowest common denominator among the individual solipsisms which it is the writer's real concern to project.⁵⁵

However, the very notion of fantasy appears to rely on a "general agreement" about what can or cannot happen. Joanna Russ extends Delany's definitions arguing that "fantasy is fantasy because it contravenes the real and violates it.", she goes on,

science fiction stands in some kind of paradoxical relation to both fantasy and naturalism, in much the same way that satire stands in relation to both fantasy (the exaggeration) and actuality (the model).....Critics outside the field, who assimilate science fiction to fantasy, tend to neglect both the straightforward realism of most science fiction (I'm talking about style, remember) and the oddities that such realistic matter-of-factness produces.....events in a science fiction story are first and foremost What Happened they are to be taken as literally true in the same sense that events in any naturalistic novel are to be taken as literally true⁵⁶.

It is this commitment to 'realism', scientific language, the authentic report, the slavish pursuit of scientific accuracy in science fiction, which gives rise to a remarkable tendency which seeks to validate its technology.

What counts as coherence in a work of science fiction seems largely to be based on the application of such principles which a critic would never dream of applying to a work of "naturalistic fiction". This kind of criticism is itself pseudo-science.

Frederic Jameson attempts to raise this principle to a precept in an essay entitled 'World-Reduction in Le Guin: The Emergence of Utopian Narrative',

One of the most significant potentialities of SF as a form is precisely this capacity to provide something like an experimental variation on our own empirical universe;⁵⁷

Jameson, writing on Le Guin's Left Hand of Darkness⁵⁸, notes that in "extrapolating one of our own Earth seasons" and pushing it to its "ultimate conclusions" Le Guin is "experimenting on a principle of systematic exclusion". Jameson examines the effects of this principle of systematic exclusion in "other thematic areas of the novel", notably in its treatment of sex and of industrialisation. The concept of "kemmer", he claims, "does away with all that is problematical about sex," and that the absence of an industrial revolution in Karhide labels capitalism as a disease of "change and meaningless momentum". Jameson's criticism and conclusions are quite frankly not applicable to the book he is ostensibly examining.

The "problems" which Genly Ai encounters on Gethen, his feelings of estrangement when living in a world of ambisexual "human beings", as opposed to men and women, constitute the dramatic conflict of the book. It is nonsense to say that "Le Guin does away with all that is problematical about sex", the book is an explicit examination of the ideology of sexuality as it applies to our own culture.

The "problems" are there in the cultural baggage of the first person narrator. The exact makeup of the world is less important than Genly Ai's reactions to it. Because of the stripping down and extending process used in the construction of the world of Gethen, few of the elements of The Left Hand of Darkness are unfamiliar. The most notable concept requiring neologism is "kemmer", in our terms it refers to an alternative sexuality. Although the novel draws heavily on Eastern culture, it could still be said to operate on the "one-step-beyond" principle, in that it alters the world in only one crucial aspect.

The coinage "kemmer" is a good example of a neologism, which unlike others to which I have referred, has no use outside the fictional context. The nearest equivalent to "in kemmer" would be to "be on heat", with the crucial difference that for the ambisexual Gethenians the period of sexual activity which is kemmer, determines their sexuality for the rest of the cycle. We understand the coinage by relating the behaviour of human beings and animals to the behaviour of LeGuin's fictional characters.

Wittgenstein remarks in Philosophical Investigations

The common behaviour of mankind is the system of reference by means of which we interpret an unknown language⁵⁹

Wittgenstein, it must be remembered, characterises language as a form of human behaviour, and language may not be considered outside the system of language-games because it is through sharing in the playing of the language-game that language is connected with our life. Linguistic change is not caused by new concepts, and new concepts are not brought about through changes in language.

It is the playing of the language-game, essentially a learning process, which promotes change. Wittgenstein remarks in On Certainty

When language games change, then there is a change in concepts, and with the concepts the meanings of words change⁶⁰.

The fact that "kemmer" has no use outside its fictional context (none that I can think of anyway), i.e. the language-game of LHD, does not mean that it means less than "robot", which has. Both rely, as Wittgenstein says, on a certain amount of "stage-setting" and their importance is determined by their role within it.

When one says "He gave a name to his sensation" one forgets that a great deal of stage-setting in the language is presupposed if the mere act of naming is to make sense⁶¹.

Thus, the word coined in a piece of fiction may have no use in the non-fictional world simply because the "stage-setting" which gave the word meaning in its fictional context is inappropriate to the larger context. Such words as have found their way into our language, Orwell's "doublethink" for example, do so because the author patterns his work around a world of human behaviour which is either contemporary or of the not-too-distant future. The compatibility of the linguistic community of Nineteen Eighty-Four with our own does not, however, guarantee that any other of its neologisms will cross into popular speech.

Jameson's accusation that the world depicted by LeGuin is inadequate, betrays a curiously literal attitude to language. Does the world of the text have to be present as if we could gaze down upon it like Gods? I might ask, why should we be able to construct a coherent world from LeGuin's descriptions?

Jameson is obviously more concerned with what is not there than what is. He would like to be able to build a kind of mental model from The Left Hand of Darkness about which he could say, "That bit is nicely made, but that bit is inaccurate." Just as Ulysses is said to contain a map of Dublin, Jameson would like to see a map of Gethen. Riddley Walker and The Silmarillion & Dune actually have maps of their respective territories included with the text. Marc Angenot, commenting on this tendency in science fiction, remarks "For the SF writer the 'map' and the 'ground' are necessarily 'confused'"⁶². Angenot attempts, to show that it is the absence of

paradigms in 'SF discourse' which make such discourse distinguishable from what he terms "realistic" discourse. He asserts that invented words in science fiction create a "paradigmatic mirage" and hence his distinction between neologisms and "fictive words". The paradigmatic structures apparently necessary for meaning to arise from a realist text are somehow missing in science fiction. Thus the Martian word "Nususumu" (which is an animal I think) implies the absent paradigm "the whole Martian language".

The fictive word inserted in the syntagmatic structure of the text evokes for the reader a paradigm implied in the text, or "paradigms of his own world", which he must extend, or elaborate on through a series of conjectures. Angenot writes,

The syntagmatic insertion of the fictive word creates the illusion of paradigmatic structure, which supposedly corresponds to empirical constructions⁶³.

What he means is that the grammar of the sentence into which the "fictive word" is inserted implies a referent in the real world.

And when Angenot writes

The existence of a language (Martian) even if represented by only a few queer quotations, implies the existence of intelligent life and a "fictive" referential world.⁶⁴

he implies that the "referential world" of realistic fiction is somehow more wholly present than in the text. Because the world of Gethen or Nineteen Eighty Four are not part of the reader's experience, are "illusory general systems", they do not warrant the kind of investigation which the world implied in naturalistic fiction does. The reader accepting this reads science fiction in a "conjectural mode", accepting also the "delusive" character of the semantic paradigms. Angenot further distinguishes the "lexical creations" of Lewis Carroll in The Hunting of the Snark from invented words in science fiction.

The SF writer does not lead the reader to a semantic dead end as Carroll does: he leads the reader to believe in the possibility of reconstituting consistent paradigms - whose semantic structures are supposedly homologous to those in the fictive textual "world".

The syntagmatic insertion of the fictive word creates the illusion of a paradigmatic structure, which supposedly corresponds to empirical constructions⁶⁵

Thus invented words in science fiction although not utterly without meaning, (like those of The Hunting of the Snark) are deficient in the same. And if I read the latter quotation above correctly, deficient because the paradigmatic structure does not truly correspond to real "empirical constructions", in short because it has no object.

This, I maintain, is why Angenot calls Carroll's neologism semantic "dead ends". Carroll does not describe to Angenot's satisfaction the "borogroves" or the "Snark", does not provide an object of thought, and therefore fails in Angenot's view to impart meaning to the words.

A study of the construction of Newspeak and its function in Nineteen Eighty-Four, will establish that the word coinages of science fiction need neither be "semantic dead ends" nor "semiotic lures", and that it is Angenot, imperfectly adopting semantic field theory, who is confusing "map" and "ground".

"The question is," said Alice, "whether you can make words mean so many different things."
"The question is," said Humpty Dumpty, "Which is to be the master - that's all." (Through the Looking Glass. Ch. 6).

Orwell's Language: A Question of Who is the Master

It is worth observing at the outset that Orwell's "Newspeak" and Burgess's "Nadsat" play very different roles. "The purpose of Newspeak", according to the anonymous author of the appendix of Nineteen Eighty-Four

was not only to provide a medium of expression for the world view and mental habits proper to the devotees of Ingsoc, but to make all other modes of thought impossible⁶⁶.

Newspeak is to be seen as deliberately constructed to serve the political ends of Ingsoc (English Socialism) whereas the ideological colouring of "Nadsat" inheres in its role as a kind of teenage slang.

Nineteen Eighty-Four is, as John Wain observes, a polemical approach to the question of how completely human beings can be dominated. Orwell's satire deals with the more pervasive mechanisms whereby human freedoms are gradually restricted. The mechanisms of totalitarianism which Nineteen Eighty-Four dramatizes are those which Orwell perceives in post-war England. He merely exaggerates and distorts them in order that they may be more clearly shown. Further, the world which he depicts is immediately recognisable, particularly to the reader of the fifties.

As Irving Howe points out, it is only "one step" beyond the world of 1948⁶⁷. The poverty and decay, the lies and the propaganda, are instantly recognisable to the Londoner who has lived through a world-war. Orwell restricts technical advance to such areas as enable the totalitarian state greater power over the people whom it governs.

Further, as W. F. Bolton remarks

He thought that literacy and electronic media with their political and commercial blandishments threatened the subjugation, not the liberation, of the human mind⁶⁸.

Orwell runs together the features of two, ostensibly opposed ideologies, and rationalises them into a single totalitarian state. Nineteen Eighty-Four is effective as a warning because the insidious mechanisms of which Orwell warns, made overt in his novel, may dimly be perceived in the reader's own life. Howe criticises Orwell's "questionable view of the dynamics of power in a totalitarian state." He writes

As he (Orwell) portrays the party oligarchy in Oceania, it is the first ruling class of modern times to dispense with ideology. It makes no claim to be ruling on behalf of humanity, the workers, the nation or anyone but itself; it rejects as naive the rationale of the Grand Inquisitor that he oppresses the ignorant to accomplish their salvation. O'Brien, the representative of the Inner Party, says "The Party seeks power entirely for its own sake. We are not interested in the good of others; we are interested solely in power." The Stalinists and Nazis, he adds, had approached this view of power, but only in Oceania has all pretense to serving humanity - that is, all ideology - been discarded⁶⁹.

When the ideology has been rationalised out of a totalitarian system, all that remains is orthodoxy. And it is "all those smelly little orthodoxies" "contending for our souls"⁷⁰ that Orwell consistently attacks.

"Newspeak" is a satire on political language as Orwell saw it. His views on the matter are quite clearly stated in his essay 'Politics and the English Language'

In our time it is broadly true that political writing is bad writing. Where it is not true, it will generally be found that the writer is some kind of rebel, expressing his private opinions and not a "party line". Orthodoxy, of whatever colour, seems to demand a lifeless, imitative style⁷¹.

For Orwell the euphemisms and the vagueness of political writing merely mask lies. This is one of several examples which he gives.

Millions of peasants are robbed of their farms and sent trudging along the roads with more than they can carry: this is called transfer of population or rectification of frontiers.... Such phraseology is needed if one wants to name things without calling up mental pictures of them⁷².

Orwell's appendix to Nineteen Eighty-Four 'The Principles of Newspeak', covers approximately the same ground as 'Politics and the English Language' but in addition gives us some insights into the construction of Newspeak itself.

Newspeak attains dramatic form on only three occasions in 1984. However its tone, syntax and characteristic doublethink are overtured throughout in the slogans and jingles which pour out of telescreens, and the mouths of the citizens of Oceania. Winston, it must be remembered, is engaged in rewriting history.

His job is to doctor articles in The Times such that they accord with the account of history which the party currently espouses. All this is done in an early form of Newspeak.

1

times 3.12.83 reporting bb dayorder double plus ungood refs
unpersons rewrite fullwise upsub antefiling⁷³

In Oldspeak (or standard English) this might be rendered:

The reporting of Big Brother's Order for the Day in The Times of December 3rd 1983 is extremely unsatisfactory and makes references to non-existent persons. Rewrite in full and submit your draft to higher authority before filing.⁷⁴

Clearly Newspeak is a precise and concise language that is not easily mastered. We are given to believe that to some extent without intelligence and literacy one would remain outside the ideological grip of the party. This is why the proles remain relatively free. The primitive emotions which the party seeks to either eliminate or control, can only be destroyed or replaced through the agency of language. The constant indoctrination, the Thought Police etc., are in 1984 necessary only because Newspeak is not yet the normal means of communication. But

A person growing up with Newspeak as his sole language would no more know that equal had once had the secondary meaning of 'politically equal', or that free had once meant 'intellectually free', than for instance, a person who had never heard of chess would be aware of the secondary meanings attached to queen and rook. There would be many crimes and errors which it would be beyond his power to commit, simply because they were nameless and therefore unimaginable⁷⁵.

His job is to doctor articles in The Times such that they accord with the account of history which the party currently espouses. All this is done in an early form of Newspeak.

1

times 3.12.83 reporting bb dayorder double plus ungood refs
unpersons rewrite fullwise upsub antefiling⁷³

In Oldspeak (or standard English) this might be rendered:

The reporting of Big Brother's Order for the Day in The Times of December 3rd 1983 is extremely unsatisfactory and makes references to non-existent persons. Rewrite in full and submit your draft to higher authority before filing.⁷⁴

Clearly Newspeak is a precise and concise language that is not easily mastered. We are given to believe that to some extent without intelligence and literacy one would remain outside the ideological grip of the party. This is why the proles remain relatively free. The primitive emotions which the party seeks to either eliminate or control, can only be destroyed or replaced through the agency of language. The constant indoctrination, the Thought Police etc., are in 1984 necessary only because Newspeak is not yet the normal means of communication. But

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Symes explains to Winston that the compilers of the Newspeak dictionary by reducing the vocabulary seek to 'narrow the range of thought'.

In the end we shall make thoughtcrime literally impossible, because there will be no words in which to express it. Every concept that can ever be needed, will be expressed by exactly one word, with its meaning rigidly defined and all its subsidiary meanings rubbed out and forgotten⁷⁶.

Instead of having a great array of words like 'good', 'bad', 'excellent', 'splendid', 'terrible' etc., the whole semantic (I think the structuralists would call it a paradigmatic structure) is replaced by 'good' and its negative 'ungood', qualifiers are 'plus' and 'double'. So, 'terrible' might be rendered in Newspeak as 'doubleplusungood'. If language really did work like Newspeak, the structuralist model might just have some credibility. In fact the system of binary oppositions, such as 'male', 'female', can only work in the kind of simplified case which ignores the subtle differences in use which a class of words supposedly synonymous, have. The paradigm for 'maleness' for example, intersects with so many other paradigms, that the concept of a paradigmatic structure is totally unworkable as a mode of literary textual analysis. The paradigm of 'maleness' and 'femaleness' cannot be subsumed under the paradigm for 'persons' because animals can be male or female. If the use of the word 'male' requires a linguistic paradigm to confer meaning, part of that paradigm must be the paradigm for 'adulthood' (boy, girl, man, woman); a paradigm for gender behaviour, (masculine, feminine); a paradigm for social status and its implication of behavioural criteria, (gentleman, lady, lout, slag, etc.) The circle of references expands by an exponential factor.

The idea that 'meaning' emerges from the contracts built into the paradigms which lurk behind the words, is a variant on the theory that reference has something to do with meaning, and embodies the further fallacy that we somehow select the word most suitable to what we mean to say. It is as if the sentence were a recipe, and we went down to the word supermarket and selected which particular brand of tinned tomatoes best suited the dish which we wished to cook.

Orwell's views on language are somewhat ambiguous. His view that language somehow clothes thought, that it gives voice to some pre-linguistic experience, is quite at odds with the idea embodied in Newspeak that a reduction in vocabulary would serve to restrict and control thought. In 'Politics and the English Language'⁷⁷ he talks of "letting the meaning choose the word", and suggests putting off "using words for as long as possible" in order to "get one's meaning as clear as one can through pictures and sensations".⁷⁸ Reasoning thus, it would be impossible for Ingsoc to achieve its goal of making it impossible to think anything in conflict with the party line. To resolve this apparent contradiction it is worth looking at which aspects of Orwell's views on language find themselves embodied in Newspeak.

In the 'Politics' essay he identifies various linguistic traits which prevent clear expression. The use of dying metaphors, pretentious diction and meaningless words are just a few of the examples given. Bolton identifies several other of Orwell's 'pet peeves', each of which he describes as aspects of 'the general drift of language'.

These characteristic agencies of language change Bolton sees as inevitable and probably irresistible. They are conversion, derivation and phrasal-verbs. The first, conversion, refers to the interchanging of parts of speech. In Newspeak therefore, we find the word 'thought' replaced by 'think', and 'cut' by 'knife'. Any word may be used either as a verb, noun, adjective or adverb.

The second, derivation, is the process of making a new word by adding a prefix or suffix. In Newspeak adding '-ful', '-wise', '-un', 'plus', etc. modifies the vocabulary limited by conversion. The third aspect which Bolton lists, phrasal-verbs, we do not find in Newspeak, probably because the practice of altering the meaning of a verb by tacking a preposition on to it extends the vocabulary rather than shortens it. Newspeak in phasing out the colloquial, also phases out phrasal-verbs. Bolton, a little spitefully goes on to quote Orwell from an editorial for Polemic in which he commits all three offences.

This is a tendency to play tricks with syntax and produce unbuttoned-up and outright meaningless sentences⁷⁹.

Bolton clearly sees the practice of trying to expunge Americanisms and Latinisations from the vocabulary as a kind of linguistic jingoism.

Perhaps such a judgement is a little extreme. Orwell certainly exhibits a kind of naive horror at the language of journalists, politicians, business men and BBC announcers, but few people would disagree that his criticisms of the euphemisms and jargon which characterise official reports and political speeches, language designed to conceal meaning rather than convey it, are something more than criticisms of careless usage.

Newspeak's B vocabulary, which we are told consisted of "words which had been deliberately constructed for political purposes"⁸⁰ satirises the language of the ministries and Civil Service departments. In much the way that the department which deals with unemployment is called the Department of Employment, and the Ministry which concerns itself with building bigger and better weapons is called the Ministry of Defence, the Party deliberately embodies a contradiction of the facts in the names of its four Ministries. As Goldstein puts it in The Theory and Practice of Oligarchical Collectivism such a practice is a kind of institutionalised 'impudence'.

The Ministry of Peace concerns itself with war, the Ministry of Truth with lies, the Ministry of Love with torture, and the Ministry of Plenty with starvation. These contradictions are not accidental, nor do they result from ordinary hypocrisy: they are deliberate exercises in doublethink⁸¹.

It is misleading to lump together all the various aspects of the misuse of language which Orwell identifies, because some of these usages are simply carelessness while other practices, as Goldstein says, are deliberate, and often subtle in how they achieve their effect. It would be foolish to write-off the impenetrable language of government reports, for example, as simply inept or lacking in style, because the jargon, the euphemisms and the circumlocution are deliberately contrived to discourage the casual or lay reader, whilst communicating very precisely with the cognocenti. Even if, as Orwell points out in the Politics essay, such reports say exactly the opposite of what they mean, if you're in the know, you know that anyway.

Orwell not only embodies this capacity of language to manipulate thought within Newspeak, but makes an attempt at manipulating the reader through formal means in his organisation of the novel as a whole.

The language of Nineteen Eighty-Four, as George Woodcock notes⁸², has a double movement, but the movement of the elements is subtly in conflict. In the first movement the physical familiarity of the setting takes on an ever more sinister aspect as the book progresses. As the action becomes centred on the activities of the Thought Police and the Ministry of Love, the tatty but very recognisable London gives way to labyrinthine corridors. Initially in this first movement or thread, the reader is not asked to accept any theory, merely to identify with Winston. This 'human' interest becomes less tangible as the book progresses, and as a development lulls the reader into the sense that this world is not her/his own. It has some familiar aspects and it coheres, but it is no longer the London, the England that he or she knows. The second movement involves what Woodcock calls the book's "political and theoretical" development. The political philosophy of the Party is manifest early in the novel in nonsense slogans, idiotic 'jingles' and snatches of Newspeak. We are given Winston's incomplete and unsympathetic view of the politics of 1984, and then a more complete account is given in The Theory and Practice of Oligarchical Collectivism.

In this second thread, the form of the Party's philosophy gradually makes it more sensible to the reader.

Common to all these manifestations is an implied rather than articulated criticism of the Party. Even The Theory and Practice..., that part which is reproduced anyway, fails to propose an anti-thesis. Consider the element of criticism in the following passage from Goldstein's book.

Doublethink means the power of holding two contradictory beliefs in one's mind simultaneously, and accepting both of them. The Party intellectual knows in which direction his memories must be altered; he therefore knows that he is playing tricks with reality; but by the exercise of doublethink he also satisfies himself that reality is not violated. The process has to be conscious or it would not be carried out with sufficient precision, but it also has to be unconscious, or it would bring with it a feeling of falsity and guilt. Doublethink lies at the very heart of Ingsoc, since the essential act of the Party is to use conscious deception while retaining the firmness of purpose that goes with complete honesty⁸³.

As in the rest of Goldstein's book, the passage seeks to undermine the philosophy of the Party through parody, ridicule, and the demonstration of how the Party has debased the language. Rather than offer the reader a refutation, it merely hopes that the Party will hang itself with its own rope. It is an appeal to shared assumptions, to common-sense. No positive action is proposed. When the theory of the Party finds in O'Brien its most articulate advocate, Winston, and by implication the reader has no counter theory with which to respond. When O'Brien asks, ".....what is it, this principle that will defeat us?" Winston replies, "I don't know. The spirit of Man."

This is the equivalent, in the terms of the book, of saying, "If there is hope it lies in the proles".

It embodies the inadequate, vague hope that has sustained Winston, and it is all that remains of the familiar "human" element which characterises the earlier part of the book.

This defamiliarisation is counterpoised by an opposite effect in the political content. O'Brien's piece on "collective solipsism", "Already we are breaking down the habits of thought which have survived from before the revolution"⁸⁴, if not for the 'artificially' induced note of fanaticism, is almost plausible. Here is O'Brien again,

We control life, Winston, at all its levels. You are imagining that there is something called human nature which will be outraged by what we do and will turn against us. But we create human nature. Men are infinitely malleable. Or perhaps you have returned to your old idea that the proletarians or the slaves will rise and overthrow us. Put it out of your mind. They are helpless, like the animals. Humanity is the Party. The others are outside - irrelevant⁸⁵.

In this chapter, for the first time, the philosophy of Ingsoc is voiced eloquently, in simple powerful language. The language is stripped of the jargon which has cluttered previous articulations, "the proles" has become "the proletarians". O'Brien is using unambiguous terms accessible to almost anyone. Ingsoc is now appealing to common-sense. The reader who has identified her/himself with Winston is outmanoeuvred.

Orwell's book is an object lesson in self-deception. The reader who fails to see that the politics of the early book is as familiar as the London in which it is set, is, by the end of the book, through the gradual paring away of recognisable 'human' factors, left with little else but the politics to call his own.

Orwell based his model for Nineteen Eighty Four on the writings of James Burnham. Orwell summarises Burnham's thesis, as expounded in his book The Managerial Revolution, thus:

Capitalism is disappearing, but socialism is not replacing it. What is now arising is a new kind of planned, centralized society which will be neither capitalist nor, in any accepted sense of the word, democratic. The rulers of this new society will eliminate the old capitalist class, crush the working class, and so organize society that all power and economic privilege remain in their own hands. Private property rights will be abolished, but common ownership will not be established. The new 'managerial' societies will not consist of a patchwork of small, independent states, but of great super-states grouped around the main industrial centres in Europe, Asia and America. These super-states will fight among themselves for the possession of the remaining uncaptured portions of the earth, but will probably be unable to conquer one another completely.⁸⁶

The essay from which this passage is drawn was published in May 1946. By the August of the same year Orwell had begun to write Nineteen Eighty Four. In an essay published in March 1947, Orwell reviews a new book by Burnham, The Struggle for the World, he finds in this new book less to recommend it than the previous piece, which he defends in the following terms,

The Managerial Revolution seemed to me a good description of what is actually happening in various parts of the world, i.e. the growth of societies neither Capitalist or Socialist... etc.⁸⁷

Thus in constructing a world which is so familiar Orwell has not simply solved "one of the recurrent problems of Utopian writing", as Woodcock remarks, but is attempting to jerk the reader into greater consciousness of an existing political situation through the exaggeration (though in some instances Orwell might contend that even this was not so) of observable tendencies.

Nineteen Eighty Four not only theorises on the manner in which language circumscribes thought patterns, but it is dramatic and practical example of how susceptible the mind is to manipulation through form. The concept of Newspeak, providing much of the theoretical groundwork, integrates form and content. Bolton argues that Orwell "did not test the linguistic hearsay of his time and social class against the rigour of any theory or even any systematic observation"⁸⁸ and argues that his views on language, unlike most of his views on other aspects of society, were based on assumptions about which he was never prepared to brook controversy. This argument, that Orwell was a kind of linguistic bigot, is at points quite convincing. (Bolton's argument concerning Orwell's distinction between speech and writing is informative in this respect). But it is a mistake to say that Newspeak simply enshrines "all the usages he hated most"⁸⁹, because some of the essential characteristics of Newspeak are features which at the end of 'Politics' he recommends as rules to rely on "when instinct fails". Newspeak, as we have seen, uses a shortened vocabulary of simple words that are easy to pronounce. The B vocabulary is particularly characterised by short, usually compound, words.

In Newspeak there is no circumlocution, no "wooly" language; it is nothing if not concise. Such features seem to concur with Orwell's rules,

ii. Never use a long word where a short one will do.

iii. If it is possible to cut out a word, always cut it out.⁹⁰

These speculations leave Newspeak, as far as the theory of language is concerned, in something of a conceptual vacuum.

If thought precedes the word, Bolton observes, the theory underlying the "thought deleting" qualities of Newspeak conflicts with most of the other views which Orwell held, even with his most general view about the separability of thought and language. Indeed what Symes identifies as the ultimate goal of Newspeak, namely 'duckspeak', "to make articulate speech issue from the larynx without involving the higher brain centres at all"⁹¹, is probably the expression of one of Orwell's most persistent complaints about language. He remarks in 'Politics',

(The) invasion of one's mind by ready-made phrases... can only be prevented if one is constantly on guard against them, and every such phrase anaesthetizes a portion of one's brain⁹².

This focuses Orwell's remarks as complaints about a tendency to string together slogans and prefabricated phrases; to be simply lazy and 'unthinking' in one's use of language. Orwell's natural tendency to exaggerate raises such a simple idea to a principle. It is more difficult to raise the program outlined for Newspeak to a principle because the theory underlying it is very suspect. After all, as Bolton points out, "people can long for justice without

knowing the word for it", and in Burmese Days the Burmese girl says "At least touch me with your lips, then" (there is no Burmese word for kiss)"⁹³ and gets what she asks for. The euphemisms and jargon of political language may find their way into everyday expressions, and to some extent disguise the meaning of various phrases and conceal implications of various ideas, but there must be a clear distinction between preventing people from understanding and preventing people from thinking. Our range of feelings, emotions and concepts is not determined by our ability to articulate them.

Before we engage in action we do not have to give ourselves a kind of mental order; "Raise hand", "swivel eyes" etc... If our actions were dependent on our vocabulary a situation of infinite regress would occur whereby we would have to tell ourselves to tell ourselves to speak. Bolton's astute, but desperate, observation that the appendix to Nineteen Eighty Four is written in the past tense, and in standard English, suggests that the appendix is written after Newspeak, having failed in its program, has been superseded. Perhaps this is an indication that the theory behind Newspeak is as cockeyed as the Party itself, and is meant to be.

However, Orwell is not alone in holding this "one-way street" view of the relationship between speech and language. The extreme version of the theory is known as the Sapir-Whorf hypothesis, which holds that "we cannot form concepts for which our native language has no provision"⁹⁴. The diluted form of the theory would hold that there is a common underlying structure to all languages, which Chomsky calls deep grammar, conditioned by a shared, innate, human, language capacity, and that the conceptual differences which we find between languages are superficial. The extreme form of the theory we find dramatically treated in Samuel Delany's Babel-17.

Linguistic Relativity: Babel-17, the Tail Wags the Dog

The action of Babel-17 takes place on and between the worlds of the Earth Alliance. The Alliance War Yards, at Armsedge in the region of Bellatrix, and an area of space known as the Specelli Snap. The title refers to an "artificial" military language used as a weapon by the "Invaders" with whom the Earth Alliance has been at war for twenty years. The book traces the development of one Rydra Wong in her attempt to find how the language works and who is using it. Rydra Wong is twenty-six, beautiful, "the most famous poet in five explored galaxies"⁹⁵, a linguist, a telepath, and a Interstellar Space Captain.

In Delany's novel Rydra Wong's speculations on the nature of Babel-17 provide a framework and a pretext for more general observations on language, society and communication. Because Rydra is a poet and a linguist her perceptions on these matters are particularly acute. Rydra is the central intelligence. Descriptive passages which are not setting the scene or forwarding the action are devoted to Rydra's perceptions, and more importantly her perceptions of her perceptions. As in the following passage,

No.

She didn't 'look at the room.'

She 'somethinged' at the something.' The first something was a tiny vocable that implied an immediate, but passive, perception that could be aural or olfactory as well as visual.

The second something was three equally tiny phonemes that blended at different musical pitches: one, an indicator that fixed the size of the chamber at roughly twenty five feet cubical, the second identifying the colour and probable substance of the walls - some blue metal - while the third was at once a place holder for particles that should denote the room's function when she discovered it, and a sort of grammatical tag by which she could refer to the whole experience with only one symbol for as long as she needed. All four sounds took less time on her tongue and in her mind than the one clumsy diphthong in "room"⁹⁶.

This whole passage qualifies the experience denoted by the words "she looked at the room". We subsequently discover that Rydra is thinking in Babel-17. It forces her to think in a very precise way. The manner in which it is constructed makes certain relationships in the observed world unavoidable. Rydra explains this principle herself when she is teaching the Butcher the use of the word "I". The Ciribians are a friendly, intelligent, "galaxy-hopping life form" who because of their reproductive processes and body heat changes have three forms of "I". Although we find out very little about these beings we are told that, "Their whole culture is based on heat and changes in temperature."⁹⁷ Because they have no word for housing or dwelling,

You have to end up describing "...an enclosure that creates a temperature discrepancy with the outside environment of so many digress, capable of keeping comfortable a creature with a uniform body temperature of ninety-eight-point-six, etc"⁹⁸.

Conversely, they can describe a "huge solar-energy conversion plant" such that another Ciribian could build it, in nine words, "Nine very small words, too". Alien encounters are few, she explains, "Because compatibility factors for communication are incredibly low". Babel-17 is a language which programmes whoever learns it to sabotage the war effort of the alliance, that programme is part of

its grammar. In order to make this person an efficient saboteur, the language is an exact analytical language which "almost assures you technical mastery of any situation you look at". Thus when Rydra thinks in Babel-17, as when she "somethinged at the something", or breaks the three stranded web restraining her, or the invaders' "defence" formations, it is the grammar of the language which makes immediate "what should be done, must be done."⁹⁹

In learning Babel-17 Rydra unwittingly becomes a saboteur (even of her own spaceship). She explains that the reason for this is that Babel-17 has no "I".

The lack of an "I" precludes any self-critical process. In fact it cuts out any awareness of the symbolic process at all - which is the way we distinguish between reality and our expression of reality¹⁰⁰.

Babel-17 is compared to a computer language. The person who knows it is programmed to react in a certain way to certain stimuli. Because the person is thinking in Babel-17 and this language has no "symbolic process", the word is the thing, "And the lack of an "I" blinds you to the fact that though it's a highly useful way to look at things it isn't the only way"¹⁰¹.

Despite the wealth of theory concerning Babel-17, the language achieves no more dramatic realization in the book than description in such terms as "equally tiny phonemes that blended at different musical pitches", or "a three particle vowel differential", or "clot of tiny singing sounds on an area of her tongue smaller than a coin". In short, it is never written. We are never privy to Rydra's notation.

Throughout Babel-17 Delany exploits any opportunity to make dramatic his concern with language, or more specifically communication. Thus at the end of the book Babel-17 is corrected, "missing elements" are introduced and "ambiguities" compensated for. This is Babel-18, the linguist's equivalent of a happy ending. The perfect language.

The imperfect language, Babel-17, shares at least one characteristic with Newspeak, namely that it is designed as Lem notes as an instrument of enslavement. It limits behaviour and thought. As I noted with Newspeak such a project for a language has practical as well theoretical problems. Benjamin Lee Whorf outlines his principle of linguistic relativity thus; "all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated." Babel-17 is clearly a rather extreme application of the Whorfian thesis.

Hockett in an essay entitled 'Chinese vs English: An exploration of the Whorfian Thesis' establishes that English and Chinese differ, not in what it is possible to specify in either language but in "what it is relatively easy or hard to specify"¹⁰³. He further observes that "From the time when science became observational and experimental" "speech-habits were revised to fit observed facts, and where everyday language would not serve, special sub-systems (mathematics) were devised."¹⁰⁴ This struggle against inherited linguistic limitations effectively relegates the Whorfian thesis to a linguistic backwater.

The impact of inherited linguistic patterns on activities is, in general, least important in the most practical contexts, and most important in such goings-on as story-telling; religion, and philosophizing - which consist largely or exclusively of talking anyway. Scientific discourse can be carried on in any language the speakers of which have become participants in the world of science, and other languages can become properly modified with little trouble; some types of literature, on the other hand, are largely impervious to translation.¹⁰⁵

Hockett suggests that the language of science cuts across the boundaries indicated by Whorf's "linguistic relativity principle," and more importantly distinguishes the use of language in a practical context from the use of language in literature. The vocabulary and grammar of a particular culture may predispose the native speaker to a particular world-view; it may predispose that speaker to certain philosophies. But it would be unfair to say that language imposes these philosophies. What Wittgenstein, Ryle, and the 'ordinary language' school found was that language nevertheless leads philosophers astray, and make similar distinctions to Hockett when teasing out how various uses of language are more likely than others to fall victim to what David Pears calls language's "deceptive pointing".¹⁰⁶

Before I go on to look at how the philosophy in science fiction reflects this characteristic, it might be useful to summarise how language is used in science fiction. After all, it partakes of various modes of discourse, that of science, that of philosophy, of various kinds of literature, the novel, the fable, fantasy; in short it might include any linguistic form that one could imagine.

We have also seen that science fiction writers invent words, which are sometimes nonsense, which often refer to nothing tangible or intangible, whereas on the other hand a percentage of these coinages find their way into everyday speech.

These neologisms and the artificial languages, which we have looked at may be formed on any principle, which may or may not be central to the plot of the story. They may be slang, gobbledygook, systematic distortions of grammar or elaborate codes. The relationship between new ideas and new concepts is not reciprocal. Whereas a new word is frequently coined to describe a new object, practice or concept, most neologisms in science fiction are inserted to provoke a sense that the world described is strange and exotic.

The colourful language of science fiction, it would seem, is therefore a kind of motley. Its exhibitionism merely linguistic sleight of hand. Entrusted with the task of describing the impossible and improbable science fiction has retreated into mannered prose and offers at best a few scraps from the linguists feast.

The primary problem, that of representing an alien language is not a problem of expression, merely of conventions. Apart from the fact that, as Hockett has shown¹⁰⁷, the chances of deciphering an alien language are practically zero, even if we could provide a notation, in the context of a story, it would be a very tedious thing to have to deal with.

Clearly if, as with Newspeak, the structure of the language has a bearing on the development of the story, such a struggle with the new language has its rewards. This is the area which Meyers and Barnes have covered in their various studies. They would simply have science fiction treat of linguistics as if it were a science like any other, and call for similar standards of plausibility to be met with language as with any other aspect of science fictional extrapolation. Thus, for example, in 'The Future History and Development of the English Language' Meyers is chiefly interested that future English ought to be developed along sound linguistic lines.¹⁰⁸

These problems seem quite distinct from the question which Parrinder highlights in connection with Lem. No matter how sound the linguistics, a writer who wants to present communication with alien beings must take into account the inherent anthropocentrism which characterises all language. Any confusion which there may be about whether the problem of presenting the 'new thing' is stylistic or conceptual is likely to arise here. Such confusion is confounded in the case of Solaris by the fact that Lem is imagining something which is by definition beyond understanding. The view that failure to achieve these realms of the imagination where nothing can be said is explicit or implicit in a great deal of science fiction. I believe this to be a mistaken view which misunderstands and misrepresents the relation between language and the imagination.

Part of the problem lies in a common tendency to think of language as referential. The fact that a word might refer to an object or an idea, leads to the concomitant tendency to think of language as something which represents, or stands for, thought. The picture theory of language which Wittgenstein put forward in the Tractatus is a version of this tendency. It is as if the word is a kind of proxy for the real. This unfortunate misapprehension leads to a kind of nagging suspicion that words somehow lack something without an object to refer to, even if that something is only an 'object of thought'. One doesn't normally worry that prepositions and conjunctions have no reference, so it does seem strange that it should seem a problem with the nouns and verbs.

It is difficult to see why anyone should claim special status for the language of science fiction unless it was felt that words which describe objects or concepts which have no counterpart in the real world are somehow different from 1) words used in other kinds of fiction, 2) words used in everyday speech. Searle's "axiom of existence" and Angenot's "absent paradigms" are thinly disguised objects of thought, and as we saw with Newspeak and Babel-17, Whorf's hypothesis involves either words preceding thought or vice versa. Either way he can't countenance one without the other. It is as if we could allocate a scale of values to various classes of words.

'Borogrove' being signifier without signified, is a semantic dead end because it lacks a paradigm, a system of signs to confer meaning.

'Kemmer' however being a word definable in terms of animal and human sexuality has a paradigm but limited signification.

'Doublethink' gets the accolade being firmly integrated in everyday speech patterns and partaking of endless patterns of signification thereby.

Where the misspelling of Riddley Walker and the gratuitous phrase-book Russian of Clockwork Orange might fit into this scheme is anybody's guess.

I think this is all backwards. 'Kemmer' and 'doublethink' are examples of neologism where a new concept is expressed. This concept is perfectly well described in ordinary language, which, it seems to me, takes away all the mystery. 'Borogroves', 'wub', 'gluck' etc., seem to be far more mysterious. Indeed, nonsense poems fascinate precisely because they toy with our preconceptions about language. Science fiction while partaking in this game of sense and nonsense, toys with another preconception about language, notably that there are realms of the imagination, dream worlds if you will, where words cannot go. It 'pretends' as Searle might say that for want of a little more language, a little more imagination and a lot of effort we might see into a new world. But, and here is where Angenot is right, (but for the wrong reasons), not only does the language of most science fiction not bear close examination, the science and philosophy are often pretty thin as well. Angenot's elaborate schema is rather superfluous when you think of it like this. The extent to which science fiction is really trying to present 'the new thing' is dubious. If, however, a writer strove for the imaginary heights, with intellectual integrity and scientific plausibility, is it likely that he would bang his head on the linguistic ceiling?

This view of language I maintain is like the medieval idea that the stars were holes in the canopy around the earth. What Wittgenstein says much later in his life, is effectively a recasting of his famous "Whereof we cannot speak thereof must we remain silent."

Am I not getting closer and closer to saying that in the end logic cannot be described? you must look at the practice of language, then you will see it.¹⁰⁹

Here he is not warning against speaking of new things. He is not even saying that there are a class of things with which language cannot deal. As we have seen the new thing no more needs new words than the new words need the new thing. What he is saying is that the grammar of words leads us to imagine that there is a realm beyond what can be said. Many of these questions turn out to be about the logic of language itself.

Metaphysics he says is misleading philosophy in which "we express an unclarity about the grammar of words in the form of a scientific question"¹¹⁰. Russell's paradox stems from Russell's own attempts to formulate philosophical questions in a 'perfectly logical' scientific language. However by imagining the class of classes and finding that it did not include the class of things which are not a class, he began to look for something in a logical space which according to his own formulation should not exist. Logical paradoxes exert a widespread fascination. There is always the feeling that such riddles point to some fundamental crack in reality. It is as if our handle on reality has been greased. When Russell formulated his paradox he was engaged in the task of formulating an 'ideal' logical language. A language to describe language. Such an approach to language is largely the butt of Wittgenstein's later work.

In Wittgenstein's view many of the questions of philosophy are merely confusions brought about by a misleading analogy embedded in the language of the question. Such philosophy is meaningless because it is only the failure to use language correctly which allows the question to be asked. Science fiction invariably finds itself addressing questions of a philosophical or metaphysical nature. If Wittgenstein is to be believed it ought to be apparent that in doing so science fiction is tying itself in logical and linguistic knots. This we shall see in my next chapter.

CHAPTER TWO

THE TRAPS OF LANGUAGE

Hockett's statement in his 'Chinese vs English'¹ essay, that one's native language merely makes it more difficult to grasp concepts which one's native grammar does not allow for, appears on the face of it to leave the door open for communication with extra-terrestrials and time-travellers, even animals. Such an interpretation misconstrues the pedantry which characterises his and my arguments. In his 'How to Learn Martian'² he established fairly conclusively that communication with anything other than human beings is likely to be impossible. It's not impossible in principle, merely in practice. His point in moderating the Whorfian hypothesis is to establish that it is wrong to try and locate the problem in language itself. Crudely, it is the gap between cultures and behaviour that makes it difficult for certain concepts to cross the divide. Unlike Chomsky, Hockett believes that there is nothing in the theory of language to prevent communication in these cases. His distinction between scientific language and other forms of discourse, philosophy, literature etc., is justified by referral to the empirical basis of science. Thus philosophical and artistic concepts are less likely to be cross cultural than scientific or purely concrete behavioural speech. The importance of this bit of pedantry will become apparent as I proceed.

By identifying the language problems of science fiction with those of philosophy I am 'with Wittgenstein' saying that there are a class of so-called problems in philosophy that are in fact pseudo-problems.

An examination of the language of the question reveals the problem to be non-existent. My subsidiary point is that science fiction, belying its name, does not partake of scientific discourse, but being literature is more akin to philosophy.

If science fiction is to be singled out as a special case of the use of language, it is because it consciously distances itself from ordinary behaviour and has strong attraction for the metaphysical. Philip Pecorino says in an essay entitled 'Philosophy and Science Fiction' that science fiction,

fulfils the current need for a revised interpretation of reality. If philosophy is viewed as composed of two elements, the speculative and the analytic, science fiction is related to the speculative element insofar as it is primarily concerned with extrapolated future possibilities and it offers up images to aid in the interpretation of the nature of reality. It can be said that science fiction is one part of the telescope that enables philosophy to look beyond the actualities to explore the possibilities for the future of the human race.³

Pecorino goes on to suggest that science fiction should be judged by philosophy and tested in experience. This essay is published among a collection of essays under the title The Intersection of Science Fiction and Philosophy. In his introduction, the editor, Robert Myers remarks, "although science fiction and philosophy are not identical, some of their concerns and methodological techniques intersect."⁴ He divides his book up into sections dealing with such science fictional and philosophical chestnuts as "Space-Time and Time Travel"; "Human Nature and Teleology"; "History and Heroes" etc., and not surprisingly I shall cover similar ground.

In contrast to Myers and Co., my aim is to show that to a large extent science fiction and philosophy fail to act as foils for each other because they both fall into the same linguistic traps. Science fiction's treatment of time (time-travel), identity, artificial intelligence (robots and computers), minds (telepathy), the will (teleportation and telekinesis), evolution and God, all have their basis in philosophical questions that go back further than Plato. Wittgenstein and Ryle say that many of these questions only come about through taking a metaphor literally, or being misled by an image. The image embodied in the metaphor misleads us into asking questions which either have no answer or result in the formulation of a paradox.

It is easy to see how science fiction by giving dramatic form to these paradoxes can be an interesting test of Wittgenstein's hypothesis. Wittgenstein was an intelligent behaviourist. He did not think that just because we cannot see something or its cause that it did not exist. However, ascribing qualities to abstracts is often to treat them as objects. Treating time like space for example.

Time Travel: Pictures of Time

Given the extensive science fictional treatments of the subject to date it is not surprising that many people have come to accept the idea of time travel as possible. Between Wells' Time Machine and Dr Who's Tardis the plethora of time travel devices might constitute the subject of a lengthy study in itself.

However I am less interested in the style in which we might travel that its possibility to begin with. After all we travel forward in time every moment that passes and we can 'cast our mind' back or forwards without the aid of a noisy machine. The idea of time travel raises many interesting questions. How would we know if we had travelled or were travelling in time? And having established that we were in the past would we be able to change it? Clearly there are one or two logical problems associated with this notion, and a whole host of time-travel scholars prepared to tease them out. The dominant position amongst these scholars appears to be that although time travel is possible, it is not possible to change the past. Gilbert Fulmer puts it thus:

what has happened has happened. Not even God could make it true now that I had eggs instead of cereal for breakfast this morning. I fully agree that the idea of changing the past is logically incoherent, and therefore the act logically impossible. But this is no objection to time travel, for time travel does not require the possibility of changing the past⁵.

Having said this, Fulmer accepts that the possibility of "closed causal loops" is a necessary corollary to the acceptance of time travel. "Such loops" he says

are radically counter to ordinary intuitions, of course; yet once again we should not rely too complacently on intuitions that have been formed in the absence of time travel.⁶

David Lewis⁷ and Paul Horwich⁸ also present elaborate arguments defending time-travel from the many paradoxes which it appears to present.

Horwich defends the idea of "closed causal chains" as they develop from travelling into the past, but in common with Lewis is unable to accept that the past could be changed by a time-traveller. The distinction is established between affecting the past and changing it. Various stories, for example, propose that the tourist industry gets into time travel and package tours to the past are arranged. In 'Let's Go to Golgotha' time tourists subtly disguised as denizens of the time of Christ, are enabled to participate in the crucifixion story. In the course of one of these trips the participants realised that the whole jeering and booing crowd are time-travellers and that it is only their presence in the past that has made the crucifixion happen. This is a case of time-travellers affecting the past without restructuring it in relation to present day memories.

If, for example I wanted to go into the past and prevent the shooting of Abraham Lincoln or John Lennon, according to Lewis and Horwich, some chain of events would prevent me from doing so. We can only go back into the past and cause what would have happened anyway. Fulmer cites the familiar instance of the man who travels back into the past and fathers a child who grows up to become himself, i.e. the time traveller. Lem presents a similar scenario in his essay 'The Time Travel Story and Related Matters of SF Structuring', and dismisses "all structures of the time-loop variety" as "internally contradictory in the causal sense".³ Because such an instance involves creating matter "ex nihilo" Lem draws precisely the opposite conclusion to Fulmer and dismisses the idea of time-travel as a serious proposition.

Nevertheless time-travel is often a convenient means of setting up an analogy, moving to a new and exotic environment, speculating about the future or merely structuring a plot. The appeal to science, however, has its own particular problems, and often confuses the philosophical position. The Paradox Men by Charles Harness¹⁰ provides excellent examples of time loops, defying logic, denying causality and using science to make it all seem plausible. Written in 1952 it is a classic example of plot manipulation through time travel. The novel is set in Imperial America after the third great war. It is a land ruled by an oppressive slave owning elite. The hero, Alar, is a member of the society of Thieves, an organisation dedicated to the overthrow of this regime. Kennicot Muir, public hero, astronaut and scientist, foreseeing the annihilation of civilisation through a devastating nuclear war, conceives of a plan to alter the path of humanity which involves precipitating the evolution of homo superior. To this end he masterminds the building of the T-Twenty-Two, a spaceship capable of travelling at translight speeds. Muir's plan is to board this ship on its launch on July 21st 2177 and through the "micro- and macropathological geotropic transformations" effected on his body through a few million G's acting upon it, transform himself into this new being. Thus on July 21st 2172, five years earlier than its launch, the T-Twenty-Two crash lands on Earth, and after a five year journey backwards in time Muir emerges from the ship as Alar the thief. Which is the beginning of the story, if you follow. The characters central to the plot all operate from the centre of intrigue which is the Imperial Palace.

With all these courtly trappings, the Byzantine intrigue, the swordplay, slaves and sedan chairs, it is no wonder Brian Aldiss characterises this kind of science fiction as "Widescreen Baroque". He says of this category in his introduction to The Paradox Men,

Their plots are elaborate and generally preposterous, their inhabitants have short names and short lives. They traffic as readily in the impossible as the possible. They obey the dictionary definition of Baroque; which is to say that they have a bold and exuberant rather than a fine style, they are eccentric and sometimes degenerate into extravagance. They like a wide screen, with space, and possibly time travel as props, and at least the whole solar system as their setting.¹¹

The mood, he says "is somewhat Jacobethan, even down to the profusion of adjectives", and in common with the work of Elizabethan and Jacobean dramatists the "feeling for life" this sensible warm motion' (is) most sharp when set against torture and death". Harness's characters engage in the most "absorbingly unlikely" conversations. "They discuss science and history and Aristotelian logic and Toynbean civilizations and philosophy and the effects of relativity".¹² Moreover they engage in such absurd conversation precisely when any sensible person would be making a break for the nearest fall-out shelter or contemplating suicide. The action, between philosophizing, involves Kieris (the romantic interest) and Alar getting themselves in and out of sticky situations whilst on the appropriately Elizabethan quest of trying to discover Alar's true identity. This quest ends on the sun itself, where in the act of dying, (or achieving godhead), Alar remembers all.

Alar/Muir transforms himself into Homo Superior by crossing the universe in a space ship reaching speeds of two billion light years per year, which by my calculations means that it would take one second to get from Earth to Sirius.

However, ignoring the theoretically limiting factor of Einsteinian mass, the ship has travelled backward in time. Thus on July 21st 2172 a space ship crashes on Earth, and a mass, which turns out to be that same space ship, is seen to leave the Earth at "unbelievable velocity". This object travels across the universe and appears back on Earth at the same time and place as the T-Twenty-Two is launched on July 21st 2177. The T-Twenty-Two has crash landed 5 years before it took off, and the object which has been observed moving across the heavens in the intervening period was in fact that same ship moving backward in time. The plot derives its complexity from juggling with time. It is the paradox of the ship arriving before it leaves, together with its passengers, that produces the riddle over the identify of Alar/Muir/Microfilm Mind, and the number and origin of the spacecraft. This is so because it is a fairly obvious implication of time travel that one may go backwards or forward to a time and meet oneself. The ingenuity with which Harness exploits the notion of a causal time loop, and the manner in which he apparently resolves the various paradoxes thrown up by his premise, provides us with an intellectual game, which incidentally has nothing to do with the supposed subject of the story. He attempts to give substance to this intellectual game by doing some very dubious things to the Einsteinian equation for the equivalence of mass and energy. Alar declares that

when v is greater than c it would seem that Einsteinian mass M must be meaningless, involving as it does the square root of a negative number. But such a conclusion is inconsistent with the observed effect of the ship on galactic matter during the whole of its flight.

Now the alternative to meaningless M is negative v , which would make v -square positive, and the equation then follows the usual pattern for the determination of M . Distance is a positive scalar quantity, but time can be either positive or negative, depending on whether it stretches into the future or the past.¹³

This is, in essence a fairly stock rationalisation of time travel using Einstein. However, to be pedantic, it is quite conveniently forgotten, not only by science fiction writers but by exponents of teach yourself Einstein books, that Einstein's Special Theory of Relativity refers only to bodies moving at a uniform velocity. Thus relativistic effects such as appear to be suggested by the equations of this first paper, such as negative value for t , spacemen getting younger or time going backwards, are negated by the necessity of any body so described having to accelerate and decelerate. Thus, although the special theory seems to allow limited travel forward in time, that is, spacemen arriving at places younger than they would normally be, it does not deal with the beginning and end of the journey, the acceleration towards the speed of light and the deceleration on return to earth or planetfall. Such matters are covered by the General Theory of Relativity. Fascinating as these matters of time and relativity are, Einstein, contrary to common opinion, does not open the way to the possibility of time travel, in fact his theory expressly forbids it. Only an incomplete understanding of his work and an undue extrapolation from various examples used to illustrate his ideas seems to make time travel possible.

Thus, despite the obvious fascination of time paradoxes, and the manifest use to which they can be put in structuring a novel, undue analysis of such riddles inevitably results in conceptual confusion and intellectual stultification, in short a dead-end. Indeed the implications of time structured novels are far greater for literature than for philosophy or science, because time and various narrative ploys with time constitute a very large part of what is rather grandly called 'structural innovation' in the novel.

The reason these philosophical chestnuts concerning time continue to hold sway is related to our use of words when talking about time. Because time is an abstract concept we speak about time through the use of metaphors. Lee Werth in an essay entitled 'Siddhartha and Slaughterhouse Five (A New Paradigm of Time)' comments,

Certain metaphors for time appear again and again in the works of diverse cultures, and in unpacking these metaphors, in understanding their similarity we can come to understand why they are appropriate.¹⁴

to which I might add we may also come to understand why they are inappropriate. Some of the metaphors he cites are the revolving wheel and sphere; variations on the river metaphor, where it is the flow of the river which is important; light fragmented or reflected; and less versatile metaphors such as grains of sand, chinese boxes, phonograph records and various Phoenix myths.

Werth outlines two necessary conditions symbolized by time metaphors,

- (i) a serial continuum of coexisting elements that constitute a permanent and unchanging order
- (ii) a relationship of this series to ourselves, or to something, a relationship that changes at each instant, thus giving rise to the transiency and flux of human experience (or the world).¹⁵

The conditions which he outlines fit very conveniently the metaphor of time which Werth prefers, namely the filmstrip. Every frame co-exists with every other frame on the reel, and in projection as each frame moves past the gate it is "brought to life" giving the overall appearance of action.

He remarks

If we consider a static series of elements (condition one) and introduce no other consideration, we cannot speak intelligibly of temporal relations.

A serial order can be understood as a temporal order only after we introduce a state change of some sort. Hence condition two must be met before time concepts can be rendered intelligible. When the filmstrip is projected, we can use the terms 'earlier' and 'later' meaningfully.¹⁶

However we use the terms 'earlier' and 'later' in connection with a multitude of serial orders which need no temporal ordering. Thus we speak of earlier and later numbers in a series of integers; an earlier page in a book; or we might speak of a station being earlier on the Victoria line. All these circumstances are susceptible to being construed temporally, that is, we can read a number series, and a book and go on a train journey in a way which makes such descriptions not metaphorical at all, but literal. Equally our temporal experience of these series might be reversed or in some other way changed about. The possibility of re-editing the life represented by the filmstrip appeals to Werth. He attempts to correlate this view of time with Einstein-Minkowskian space-time theory, by regarding "ordinary consciousness as sequentially intersecting the four-dimensional, static human body along its world-line in order to bring to life (bring to the "screen of consciousness") different three-dimensional states."¹⁷

This is the view which the Tralfamadorians have of time in Slaughterhouse-Five "Our time becomes a spatial dimension to them; our long life appears to them as our long body."¹⁸ This metaphor, despite its apparent sophistication in accounting for current scientific theory regarding time, shares with many of the other metaphors the need for individual perception of events as the essential "activating" feature.

Thus for the metaphor to work the river must flow by as we stand on the bank, for example, the sphere must revolve in relation to a fixed point, and the filmstrip pass in front of the lamp.

Werth again

If for some reason, the river metaphor omits bank and bottom, as does Bergson's and Newton's, the second condition is violated. to the extent that the metaphor remains intelligible, we are implicitly adding ourselves as the fixed point by which the river flows.¹⁹

All of these various metaphors stress one or other aspect of time which the author of the metaphor wishes to stress. Werth finds it impossible to use the river metaphor without introducing the factor of individual perception. Whichever metaphor you choose to use it will have its drawbacks. Representing time as another axis on the usual 3-dimensional graph (Minkowski) treats of time as if it were another spatial dimension. Minkowski's visualization of Einstein's formulae gives rise to this notion of the time/life line which can be intersected anywhere along its length to describe the now. Western metaphors have treated time like space for hundreds of years, by taking such a metaphor literally we get into a muddle. What we call time is a means of structuring our perception of the world.

The essential characteristic of our construct of time is that we can measure it. However, the fact that we can measure length and measure time, does not imply any similarity between the idea of length and the idea of time. These are two entirely different uses of the word 'measure'. It is only when we come to ask ourselves what exactly we are measuring if its not spatial, that the language we are using starts to become inadequate.

It is only when we ask ourselves questions like "Where does the present go when it becomes the past?" and "Where is the past?" that the analogy we use starts to become problematic. Wittgenstein describes it thus

It is clear that this question most easily arises if we are pre-occupied with cases in which there are things flowing by us - as logs of wood float down a river. In such a case we can say that the logs which have passed us are all down towards the left and the logs which will pass us are up towards the right. We then use this situation as a simile for all happening in time and even embody the simile in our language, as when we say that "the present event passes by" (a log passes by), "the future event is to come" (a log is to come). We talk about the flow of events; but also about the flow of time - the river on which the logs travel.²⁰

Such an analogy for time gives rise to the device used in Slaughterhouse Five, where past, present, and future all exist at once and any intersection into that sequence is what we choose to call the present. That Billy Pilgrim has no choice as to where he is in this continuum is precisely how he is "unstuck in time". In The Paradox Men Alar finds himself contemplating his four-dimensional body, thus he moves outside his normal continuum and inserts himself back into it earlier than he left it.

He was suspended in space near a silent, winding column. Gravity was banished here. There was no up, no down, no frame of reference for direction, so the column was neither necessarily vertical nor horizontal. His eyes brightened as he realized that a cross-section of this column would resemble very closely the vertical cross-section of a human being. Looking about, he discovered that the column appeared to go on indefinitely He returned slowly, pensively, and studied the column at approximately the point where he had found himself when he recovered consciousness.... He stuck in his right leg Tentatively he eased the rest of his body into the column.²¹

Having achieved this he uses his knowledge of the events which are about to happen to him again, to alter them. This is where the paradox arises because if he is precipitated into time travel by pain, and by travelling back ten minutes he is enabled to avoid that pain, is it not true that he could never have travelled into the past if he avoided the cause of his travelling there? etc., etc. This is where Harness throws himself into conflict, not only with Lem, but with all the other believers in time travel. He has proposed an event without a cause, probably the greatest sin you can commit in philosophical circles. The Paradox Men breaks the causal loop and allows for the past to be reconstructed. It transpires that Alar has been manouvered into his various crises by the Microfilm mind in an attempt to precipitate in Alar awareness of his various abilities.

Thus when Alar is subjected to his final test of pain on the Sun, he once more finds himself contemplating the "time axis of his four-dimensional body" and is able to change time such that "Operation Finis", America Imperial's plan to wipe out the Eastern Federation, cannot happen and trigger the nuclear holocaust which will end the world. Thus at that final moment Juana-Maria muses

She wondered what Muir-Alar could do that would avoid Operation Finis. Perhaps he would go back in time and cause Haze-Gaunt to be still-born. But then another dictator, even more ruthless, might arise and destroy civilization Perhaps the Michelson-Morley experiment which proved the contraction of matter in its line of motion and started Einstein off on his theory of the equivalence of matter and energy could be doctored so that Michelson would actually get the interference image he sought. But then there would be Rutherford's work on the suspiciously heavy electrons and an infinity of allied research. And human nature being what it was, it would again be just a question of time.²²

But the change that Alar effects is in the "colloidal webs" of the frontal lobes of Neanderthal man, replacing the killer instinct with a spirit of brotherhood. Thus Neanderthal man,

had no way of knowing that even as he spared the animal-like Eoanthropus, so would he, Neanderthal, be spared by Cro-Magnon. Nor had he any way of knowing that by offering the open palm instead of the hurled spear he had changed the destiny of all mankind to come. Or that he had dissolved, by preventing the sequence of events that led to its formation, the very intelligence that had wrought this marvellous change in the dawn-mind.²³

End of story, as they say. Everything that has been narrated is wiped out by Alar's final act, and we come into another area of time-travel theory, the notion of parallel times and branches in time. As if like lightning time travels several false paths before it finds earth. Once again we fall victim to an analogy. The Paradox Men is a beautiful example of how one can play tricks with time travel. The various paradoxes which Harness generates exert a fascination which I would be the last to deny. Indeed there are hundreds if not thousands of other stories which rely on similar conceits. But to read them one must suspend one's belief. And as soon as you start to ask question like "What is time?", "What is now?" etc., the metaphors which such stories entail begin to exert their sway.

Time is measurement. Time that you can't measure isn't time. Just as space that you can't measure isn't space. The idea of time travel involves a passage of time which can't be measured. Einstein allows for the idea that people might measure time differently, that is it may be perceived differently for different observers, but he does not allow for one to 'edit' time²⁴.

One can speed the film up or slow it down, but not look at it all at once or take a bit out and put it somewhere else. One of the other pieces of pseudo-science which governs time travel ideas is the idea that if we could see far enough we could see the past, i.e. the light coming from Sirius set off from Sirius 4 years ago. If Sirius exploded three years ago we would still see it as it was four years ago. It is also true that if we could see far enough we could see America, and we do via satellite. But seeing isn't being there. Even if we caught up with a light beam from the big bang we still wouldn't be there.

The metaphors we use when talking about time are useful and unproblematic in the context of every day situations, they only become misleading when we talk about time itself. Wittgenstein comments

No sharp boundary can be drawn round the cases in which we should say that a man was misled by an analogy. The use of expressions constructed on analogical patterns stresses analogies between cases often far apart. And by doing this they may be extremely useful. It is, in most cases, impossible to show an exact point where an analogy begins to mislead us. Every particular notation stresses some particular point of view²⁵.

Wittgenstein locates the problem in a lack of awareness of the different uses of words, and a simultaneous tendency to mistake the role of other words. Thus he says of these two sentences: -

"The sun sets at six o'clock".

"The sun is setting now".

We are inclined to say that both "now" and "six o'clock" 'refer to points of time'. This use of words produces a puzzlement which one might express in the question "What is the 'now'? - for it is a moment of time and yet it can't be said to be either the 'moment at which I speak' or 'the moment at which the clock strikes', etc., etc.," - Our answer is: the function of the word "now" is entirely different from that of a specification of time²⁶.

If you are not satisfied with that answer, and fall to speculating about what 'the present' is or what the 'past' is, or even what 'time' is, then it is likely that you will end up imagining situations not unlike those presented in science fiction stories. Charles Hockett in his essay 'Information, Entropy, and the Epistemology of History' encounters a problem when attempting to ascertain how one might test the validity of certain propositions of a historical nature. He resolves this by first making a statement defining past and future "as observed from any single neighbourhood, the past is determinate and the future indeterminate", and secondly by adopting a non-European view of time and events. Thus he says

Neither our everyday language nor the special mathematical jargon of modern physics is really well adapted for talking about the world in this way. The time of the physicist is the time of "earlier" and "later" and of quantified durations,... the physicist's traditional frame of reference needs supplementation, not replacement.²⁷

The advantage that Hockett's supplementary frame of reference has is that it does not use a spatial metaphor. Hockett's "Hopi-Whorf time" is not subject to such metaphorical vagaries. Hopi verbs have three formal tenses which he calls the nomic, the reportive and the expective. The nomic is used in assertions of something unchanging; the height of a mountain, or the colour of the sky. Thus the reportive defines the province of history, it refers to events about which we have information. The expective is appropriate to the realm of the indeterminate, the anticipated or planned for.

Having dispensed with metaphor, and defining our perception of time only by the degree of determinism, Hockett finds himself in conflict with Laplacian Mechanics and proposing a new view of the laws of Thermodynamics.

Thus, when considering the relation of information and entropy, Hockett suggests that instead of the irreversibilities in the behaviour of heat systems (second law of thermodynamics) being in contravention of the reversible behaviour of mechanical systems,

statistical mechanics must be read in the opposite direction, so that reversible systems appear as special limiting - and perhaps asymptotic or even non-existent - cases of irreversible ones, and so that incompleteness of information comes to be the result of such matters as temperature and entropy, rather than their cause²⁸.

If you imagine that time stands still for everybody and everything in the world but you, how would you define the situation? How would it feel? Nothing could move, not even an elementary particle, therefore no heat. But matter only exists due to the movement of elementary particles and their various interactions with other particles, thus matter would not exist. More correctly such a system at Absolute Zero could not be observed. Thus a system without entropy is incapable of eliciting information. So although we may define information as the inverse of entropy, "as that which decreases when entropy increases and vice versa"²⁹ the notion of complete information is meaningless, for the observability of a system implies, indeed requires, a degree of entropy.

The idea that there can be a frozen moment in time, that we can completely define that state, that we can possess all the information about it, is a stated aim of scientific procedure, and especially the misguided belief of those working on a unified field theory.

Knowledge is, as Wittgenstein says, only possible where there is doubt³⁰.

All testing, all confirmation and disconfirmation of a hypothesis takes place already within a system. And this system is not a more or less arbitrary and doubtful point of departure for all our arguments: no, it belongs to the essence of what we call an argument. The system is not so much the point of departure, as the element in which arguments have their life³¹.

In considering, in the last years of his life, the foundation of "language-games", Wittgenstein emphasizes more and more the "unlearned" nature of certain apparently empirical propositions. Certain aspects of the "world-picture" are part of our inherited background against which we distinguish between true and false. Of these special cases of propositions it makes no sense to say that we have knowledge or doubt.

It is quite sure that motor cars don't grow out of the earth. We feel that if someone could believe the contrary he could believe everything we say is untrue, and question everything that we hold to be sure.

But how does this one belief hang together with all the rest? We should like to say that someone who could believe that does not accept our whole system of verification. This system is something that a human being acquires by means of observation and instruction. I intentionally do not say "learns"³².

Thus doubting that the chair I am sitting on exists, or that the Earth has existed for many years, or that I am the same person that I was yesterday, throws into disarray our whole system of thought. Wittgenstein's example is a science-fictional rather than a philosophical case of a fantastic proposition undermining the basis of language and therefore exhibiting a profound pointlessness. Given the situation predicated we do not know what constitutes a consistent extrapolation from the premise.

There is no logical basis on which to proceed, if we accept that cars grow out of the Earth, because the premise de-bases logic. On examination, much of science-fiction is based either overtly or unwittingly on such premises. However, when Wittgenstein says that the fact that there is no test which will verify whether someone has been to the moon, makes it an objective truth about which I cannot be mistaken, he has not given a bad example, merely established that the line that demarcates the madman from the philosopher, is defined more by social awareness than by physics.

The example also indicates one reason why there is no point at which we can clearly state that "Here is where the analogy becomes misleading." In fact when we consider problems of identity and artificial intelligence as treated in science fiction, the paradoxes of time seem quite trivial. Clearly, talking about time without using metaphors is difficult. In the sense that it is difficult to ascertain to what extent individual science fiction writers put a scientific/philosophical face on fantastic premises; the application of philosophical rigour to science fiction is likely to be a good test of seriousness.

Time is probably the clearest and commonest example of science-fiction embodying a particular form of philosophical nonsense. Not all of the premises of science fiction are fantastic. Some are more attractive than others because the extrapolations which they suggest embody an almost mythical element. We have a picture of time which makes us ask what time is.

We ought to ask ourselves where we got the picture. The pictures as Kenny remarks, are often "not really pictures at all, but misleading illustrations of grammatical turns of speech"³³. Jung has documented the power of such images and 'turns of phrase', in his analysis of dreams. Whereas Jung accepts the power of such symbols, Wittgenstein contends that we should fight them. Kenny sees this as one of the essential elements in the continuity of Wittgenstein's philosophy.

The right method of philosophy, in both the Tractatus and the Investigations, consists of putting a stop to metaphysics; in both of the works this is done by showing that the metaphysician has given no meaning to one of his expressions - in the earlier work because he has not correlated it with an element of reality, in the latter because he has not fitted it into a language game³⁴.

To this extent science fiction and to a large extent philosophy partake of the metaphysical. In this chapter I will look at several other examples of science fiction "failing to give a meaning" to one of its terms. In each case we are asked to make a mental leap into the unknown. To suspend disbelief on one crucial aspect of the projected world. As the writer chases down the ramifications of this suspension or extrapolation we are invited to have no less than complete faith in his driving. Usually he invokes some scientific principle to back up this request.

Colin Greenland commenting on the work of J.G. Ballard remarks on the tendency of the Surrealists, Breton, Appolinaire etc., to use science to justify their activity, and on their peculiar tendency to cast their manifestoes in pseudo-scientific terms³⁵.

Despite the appositeness of this observation to the work of Ballard, there are crucial differences between science fiction and Surrealism which are connected with the willingness of the author to extrapolate from his 'fantastic' premise. I will illustrate this point with another example drawn from science fiction where a picture or an analogy becomes misleading and leads us into philosophical puzzles and metaphysical speculation.

Identity Problems: Minds Vs Bodies

When Gregor Samsa awoke one morning to find himself transformed into a giant insect, he retained his sense of his own identity. Apart from certain obvious physical differences from the Gregor of the day before, Gregor remains the same person. He has the same memories, emotional attachments and values which sustained him in the occupation of commercial traveller. He worries about what his employer will think of his being late for work, and is keen to impress upon the chief clerk his willingness to resume his rightful place in the firm. Such considerations dominate Gregor's thinking even as this dramatic change overtakes him. Physical considerations such as the number of legs he has, what he would like to eat and how something might be done to remedy his position, hardly impinge upon his consciousness.

The distinction between surrealism and science fiction is not just the lack of explanation for out-of-the-ordinary events, but the concomitant lack of concern shown by the protagonists.

Thus what at first might seem an excess of apathy, a lack of curiosity, is in fact a characteristic indifference to what Wittgenstein calls the "forms of life" which characterise the fictional world. We are struck by Gregor's lack of concern about his coleopterous condition, but the world which Gregor inhabits is subtly different from ours, for his family accept it with similar grace. We do not have enough information to extrapolate a world based on the psyches of the characters in Metamorphosis³⁶, but if we did, and if we tried to make it cohere, we would be writing science fiction.

Science Fiction is characterised therefore, by an attempt to help the reader feel comfortable with, or equipped to deal with, the new environment. Only when such matters arise in the text do questions like "What is identity?" and "What is memory?" lead the author into deep philosophical waters. The problems of identity which we had in The Paradox Men, "Who is Alar?" and "Can he be the same person as Muir?", do not arise in Metamorphosis because the author does not try to show the passage from Gregor the man to Gregor the beetle. One of the problems with 'new wave' and satirical science fiction is that to the unschooled reader what is an unexplained and fantastic situation may in fact merely be a parody of a science fiction cliché. Lack of knowledge of the genre results in a failure to adjust to the tone.

Writers have been playing fast and loose with the notion of identity since the first set of twins was born, if not before. Sisters have inadvertently married brothers, impostors have become kings, and the wrong man executed.

But for all that, the stool-pigeon with the new face, the man who becomes a woman, and the spy who comes in from the cold, retain their identity in all but a public sense, that is they retain their memories.

To get into serious conflict with the logic of identity a writer needs an amnesiac, re-incarnation, disembodiment, or schizophrenia, or any combination thereof. The amnesiac killer turned hero is a fairly mundane example of an identity problem. ("Is he culpable for crimes which he doesn't remember?"), without fantastic premises. A.E. Van Vogt's The World of Null-A adds some novel twists to the old mind-body duality problem.

In the year 2560 A.D. Earth's affairs are managed by the games machine. A giant structure which for 300 years had "sorted according to their semantic training" the people of Earth, and made decisions about who was to rule, and who was worthy of the Null-A paradise of Venus.

Self-renewing, conscious of its life and of its purpose, it remained greater than any individual, immune to bribery and corruption and theoretically capable of preventing its own destruction³⁷.

Gosseyn finds himself entangled in a plot to overthrow the machine. He also discovers, as the games begin in the Machine city, that he is not who he thinks he is. That his memories are, at least partially, false. Once again we have the Byzantine intrigue; the hero on whom the fate of the world revolves; the mysterious manipulator pushing the protagonists around like pawns on a cosmic chess board, and a great deal of pseudo-science.

As with The Paradox Men the hero's search for identity is the chief means whereby the action progresses, and his amnesia is used to make explanations necessary and to keep the reader guessing.

Gosseyn could be said to have a mind-body problem, his memories have been tampered with by hypno drugs, yet after he is killed he appears again in a similar body with all the previous body's memories.

Fantastic, impossible, but why? Van Vogt pushes to the fore various questions about the mind-body problem, using a dramatic technique that will become familiar as we examine other science fiction texts. He recasts the familiar story of the amnesiac, the famous man re-incarnate, the ghost and the madman, in a form which takes the metaphors we use to describe mental states, and the phenomenon of consciousness, literally.

Given that the question of Gosseyn's identity, and the continuance of his mind in more than one body, is so central to the plot of The World of Null-A, I would like to examine the question of why the identity paradoxes he generates, exert such a fascination on writers and philosophers. In The Concept of Mind Gilbert Ryle outlines what he calls "the official doctrine", the "dogma of the Ghost in the Machine",

It maintains that there exist both bodies and minds; that there occur physical processes and mental processes; that there are mechanical causes of corporeal movements and mental causes of corporeal movements³⁸.

The representation of a person as a ghost mysteriously ensconced in a machine derives from this argument. Because, as is true, a person's thinking, feeling and purposive doing cannot be described solely in the idioms of physics, chemistry and physiology, therefore they must be described in counterpart idioms³⁹.

Because of the apparent disjunction between mental events and physical processes, because although the two are related there is no "causal" relation, because the mind is not observable in the same sense as the body, the connection has become mysterious. This need to make the mind something "mysterious" can be seen as a symptom of two related phenomena, 1) inadequacies in describing the workings of minds, 2) a belief that these inadequacies signal that the mind is of superior stuff to the body and somehow independent of its workings.

Thus with Gregor and Gosselyn although the body changes, the mind, being made of different stuff, remains the same. This seems logically possible if not physically so. It assumes that memory alone is enough to establish identity. (Indeed Van Vogt claims that such is the meaning of his book.) The obvious objection to this being that although I don't remember my childhood I still consider myself the same person that I was when I was younger. Indeed in Harness's story Muir becomes Alar, his body and mind transformed, his memory gone. In what sense can Muir and Alar be said to be the same person if not through physical continuity? We have no reason to believe that Alar has been substituted for Muir, just as Gregor's family do not assume that someone has replaced Gregor with a beetle.

It is only the illusion of direct access to other people's minds which the novel form gives us which makes these problems seem so insurmountable. Essentially this is so because in the novel we are privileged to the kind of introspection and mental eavesdropping, to knowledge of other people's thoughts which is denied us in normal life.

The convention of the third person 'He thought' narrative form is founded on a double fallacy, 1) that we "know" our own minds, 2) that we can know other minds like we know our own. The first is wrong because there is no reason for us to assume that we know our own mind in any privileged way. We can be wrong about our motives and our memories can fail. It is the inalienability of our sensations which leads us to ascribe a privileged status to our own thoughts. The subjectivity of mental states Searle writes,

is marked by such facts as that I can feel my pains, and you can't. I see the world from my point of view; you see it from your point of view. I am aware of myself and my internal mental states, as quite distinct from the selves and mental states of other people.⁴⁰

The third person narrative form ignores at will this characteristic and fosters the illusion that we can know a character's mind as perfectly, with the same apparent degree of certainty, that we imagine we know our own. Without the omniscient narrator, Gregor would be a beetle, albeit a big one, Gosseyn II a remarkable twin, and the Alar-Muir relation a matter of conjecture.

The narrative form in The World of Null-A in common with most modern novels contravenes one of the chief features characteristic of the mind-body relation. It reinforces the identity paradox where a first person narrative would lead us to think that Gosseyn was merely a paranoid schizophrenic.

By making the mind something that can transfer from one body to another, despite all the scientific mumbo-jumbo, Van Vogt is restating the Ghost in the Machine doctrine.

Prescott explains to Gosseyn II a law of nature which the Distorter utilizes,

"If two energies can be attuned on a twenty-decimal approximation of similarity, the greater will bridge the gap of space between them just as if there were no gap, although the juncture is accomplished at finite speeds."

"That" said Gosseyn, "sounds like pure Greek."

Prescott laughed, louder this time. "Think of it this way, then." he said. "How do you explain the fact that you have in your mind the details of what Gosseyn I did and thought? You must have been attuned, you and he; in fact its the only theoretically sure method of thought transmission - his thoughts, being alive, would have flashed to you wherever you were within the limits of reachable space.⁴¹

Simple really! By positing the existence of clones who are similar to such a fine degree Van Vogt suggests an affinity for the materialist view of the philosophy of mind, but balks it by giving thoughts super-physical identity. His telepathy with the cosmic chess player at the end of the book is made possible by the fact that he is a clone of the chess player. As with Alar, the nearest Gosseyn gets to discovering his identity is in finding the identity of a former self, a kind of father figure.

Gosseyn's body hopping ability reminds me of a comic-book hero I am very fond of called Noman. He had no human body, just a series of android bodies, all identical, and when he was killed, which he was in every episode, his mind transferred to the next one. Noman is the ultimate in transplant and prosthetic surgery. The pure embodiment of the "ghost in the machine" philosophy.

In his discussion of the idea of consciousness and identity⁴²

Wittgenstein suggests that it is the lack of purpose or situation which often characterises such introspection which gives rise to a picture which misleads.

The subtlety and depth of Wittgenstein's argument here has left him open to the charge that it is psychology and not philosophy which he is engaged in. He imagines a situation where one is reflecting on how remarkable is one's consciousness, "It is when I, for example turn my attention in a particular way to my own consciousness, and, astonished, say to myself: THIS is supposed to be "produced by a process of the brain!"⁴³. Astonishment at how intelligence, consciousness, emotions etc., can emerge from mere biological processes. He continues

Now bear in mind that the proposition which I uttered as a paradox (THIS is produced by a brain process!) has nothing paradoxical about it. I could have said it in the course of an experiment whose purpose was to show that an effect of light which I see is produced by stimulation of a particular part of the brain.⁴⁴ -

The utterance of the apparently paradoxical observation in an appropriate situation removes its mystery. Wittgenstein relates these two instances of consideration of aspects of consciousness to instances where a picture forces itself on us, and one where we choose the picture to support an application.

In numberless cases we exert ourselves to find a picture and once it is found the application as it were comes about of itself. In this case we already have a picture which forces itself on us at every turn, - but does not help us out of the difficulty, which only begins here.⁴⁵

The picture, therefore, of consciousness, can without a distinct application become misleading. Wittgenstein posits another situation.

But can't I imagine that the people around me are automata, lack consciousness, even though they behave in the same way as usual? - If I imagine it now - alone in my room - I see the people with fixed looks (as in a trance) going about their business - the idea is perhaps a little uncanny. But just try to keep hold of this idea in the midst of your ordinary intercourse with others, in the street say! Say to yourself, for example: "The children over there are mere automata; all their liveliness is mere automism." And you will either find the words becoming quite meaningless; or you will produce in yourself some kind of uncanny feeling, or something of the sort.⁴⁶

Producing "in yourself some kind of uncanny feeling" is precisely what the writers and readers of science fiction seek to do with their paradoxes. Automata are a good example.

Robots: Machines with Minds

Wittgenstein's example is by no means original. It is an old philosophical riddle which states that since we cannot have direct access to the thoughts of another person there remains the possibility that that person is an automaton merely posing as a person. Ryle states the fallacy thus :

I am conscious of all my own feelings, volitions, emotions, and thinkings, and I introspectively scrutinize some of them. But I cannot introspectively observe, or be conscious of, the workings of your mind. I can satisfy myself that you have a mind at all only by complex and frail inferences from what your body does.⁴⁷

We assume that the androids in Ira Levins's The Stepford Wives⁴⁸ do not have minds, even though they behave exactly like people. Only at the end of Asimov's story 'Let's Get Together' do we discover that the character Breckenridge is a humanoid robot sent to infiltrate Washington's security. It was assumed that Breckenridge had a mind till Lynn shot his head off and high-grade machine oil spilled out⁴⁹. Doubt about whether someone has a mind is vindicated.

Such examples seem to confirm that we have privileged access to the doings of our own mind and that self-knowledge is therefore superior in quality to other kinds of knowledge. Ryle disagrees,

The sorts of things that I can find out about myself are the same as the sorts of thing that I can find out about other people, and the methods of finding them out are much the same.⁵⁰

We might say "I cannot feel your pain, so how do I know you are feeling pain?", and argue that because I feel my pain and infer yours, the "methods of finding things out" are very different. But the answer is not as simple as that. The kind of thing we are trying to find out is very different. Firstly, knowing someone is in pain is not the same as feeling someone's pain. If you could feel it, it would be your own pain. If I see someone fall out of a window and drop 20ft to the ground I know that they feel pain when they hit, (unless they are dead, anaesthetized, or a robot) I do not feel the pain. The fact that we feel our own pain is part of our sense of identity. This applies to our emotions, enthusiasm, and feelings of all kinds. There is always doubt as to whether someone is happy or sad etc., he could be acting, if there wasn't the possibility of doubt it would make no sense to talk of the possibility of knowledge of these feelings. To be certain that the girl I was talking to was not an android I would have to define my criteria of certainty. If the android looks and behaves like a human being what would count as difference. If she has skin and internal organs just like a real person, plastic but indistinguishable from the real thing, just because she has been manufactured, does that mean she is inferior to human beings? If she died would we bury her?. Because she was only an android, a programmed thing, she never lived. This is the crux of the mind-body problem. An inability to accept that something mechanical, analysable, theoretically constructable, can be a conscious entity like ourselves. The fear of computers and robots which many science fiction stories betray is often symptomatic of an unconscious analogy between man and machine.

We posit the existence of the ethereal mind and convince ourselves that it is superior to any machine.

The various examples of stories purporting to examine the notion of identity, intelligence and artificial intelligence, do little more than reinforce the superstition that the human mind is superior to any mechanism, citing anything from the limitations of pure logic to a machine's lack of a concept of God to support this misleading notion. John Searle in his recent series of Reith Lectures examines the nature of the connection between mind and body, and attempts to refute entirely the notion that "a digital computer" can think. He begins by asserting that the essential features of consciousness, intentionality, subjectivity and mental-causation, which must be taken into account when discussing mind-body relations, are entirely compatible with the view that mental phenomena are features of the brain. He answers the question "How can the unconscious physical particles which make up the brain have consciousness?" by the pointing out that just as we would not expect to be able to reach into a glass of water and pull out a molecule and say "This one's wet.", so it would be equally daft to say of the neurons in the brain, "this neuron is in pain, or this neuron is experiencing thirst".⁵¹ Characteristics of the brain, like the characteristics of matter, have a micro and macro level, "two causally real levels of description".

In his second lecture Searle attacks the whole program of artificial intelligence.

Now, the reason that no computer program can ever be a mind is simply that a computer program is only syntactical, and minds are more than syntactical. Minds are semantical, in the sense that they have more than a formal structure, they have a content.⁵²

He illustrates this point with an ingenious example of a program enabling a computer to "simulate the understanding of Chinese". He imagines a person locked in a room with a series of Chinese symbols in various baskets, and a rule book, written in English, explaining how to manipulate these symbols. When Chinese symbols are passed into the room the rule book indicates which ones are to be passed out. Suppose, he says, that the person does not know that the symbols passed in are questions, and the symbols passed out answers.

Suppose, furthermore that the programmers are so good at designing the program, and that you are so good at manipulating the symbols, that very soon your answers are indistinguishable from those of a native Chinese speaker.⁵³

The point of this whole story is simply this: by virtue of implementing a formal computer program, you behave exactly as if you understand Chinese, but all the same you don't understand a word of Chinese.⁵⁴

Searle further asks us to imagine that we are in the "Chinese room", and the Chinese room is inside the head of a robot which moves around "causally" interacting with the world.

Suppose the robot picks up a hamburger and this triggers the symbol for hamburger to come into the room. Well, as long as all I have is the symbol, with no knowledge of its causes or how it got there, I have no way of knowing what it means. The causal interactions between the robot and the rest of the world are irrelevant unless those causal interactions are represented in some mind or other. But there's no way they can be if all that the so-called mind consists of is a set of purely formal, syntactical operations.⁵⁵

When Searle says that there is "no way that the system can get from the syntax to the semantics", he is making the error which he warns against in his first lecture. He is likening the formal element of language to the inert properties of matter, and declaring that nothing so wonderful as understanding could be imputed to the robot.

Imagining himself as the robot's brain he says

I, as the central processing unit, have no way of figuring out what any of these symbols means, but then neither has the whole system.⁵⁶

Such an observation is superfluous. If I walk up to the robot and ask it directions to the nearest library, and the robot responds, I should say that the robot understood my question and that I understood the answer. I would not stand there and object that because it was a robot its answer was "irrelevant", I wouldn't care whether it had a mind or not as long as it gave me the right directions. Wittgenstein gives this example in Philosophical Investigations,

If I give anyone an order I feel it quite enough to give him signs. And I should never say: this is only words, and I have got to get behind the words. Equally, when I have asked someone something and he gives me an answer (i.e. a sign) I am content - that was what I expected - and I don't raise the objection: but that's a mere answer.

But if you say: "How am I to know what he means, when I see nothing but the signs he gives?" then I say "How is he to know what he means, when he has nothing but the signs either?"⁵⁷

Understanding is not something somehow separate from the words which the robot speaks, and neither is meaning. I can no more understand better the robot's directions by imputing in him mental states, than the robot improve them by "meaning" them. Further, there are different uses of the word "understanding". I can say I understand the sentence "It's just round the corner." in the sense that I know English, but in the context of being out in the street I understand what it means in another way. If a computer beats us at chess, it is idle to say "It's only a machine, it doesn't understand chess anyway." For it has replied to our moves, it has 'known' how to because of the particular program which was running.

If you were playing chess by post, and subsequently discovered that your opponent was using a computer to tell him which move to make, your first reaction might well be "That's not fair!" Although the moves are made in accordance with the rules, there are no rules governing how you decide to make the moves. There is however the tacit agreement that chess is a kind of "battle of minds". Pitting yourself against a computer "Isn't the same." In this sense Searle is right about the conversation with the robot, it isn't the same as a conversation with a human being.

If I adopt the view of the Chinese-room, that the whole system of rule-book, baskets of symbols etc. 'understands' Chinese, I am still talking to a machine. However the extent to which the machine 'understands' Chinese, the level at which it knows how to operate the language, and similarly the skill with which the computer plays chess, are all defined by the program. The programmer decides which words the robot will 'know', just as he decides which tactics the chess program can adopt. So are we not really talking to the programmer, and playing chess with the programmer? The answer is no. It is possible for an average chess-player to write a program which can beat him. We would not then say that he had beaten himself.

The knowledge that we are talking to a machine, or playing a machine, does not change the validity of the directions, or the way the moves are made, it does however change our attitude. It is like seeing a beautiful girl, and then finding out that it is a man in drag.

We suddenly find ourselves in a different game. When philosophers exercise themselves with the problem of our knowledge of other minds, and ask "How do I know I am not talking to an automation, which merely behaves like a human being?", the answer is a question, "What difference would it make?". Searle says it makes a difference because the robot has not got a mind, but I submit that what he means is that because the functions of the robots reasoning are reducible in a way that the functions of the brain are not, the robot is inferior.

Searle claims that because what he calls "mental states" are caused by brain processes, by biological processes, that these mental states are incapable of duplication by digital computers. He imagines a computer designed to simulate human behaviour

If it's really a computer, its operations have to be defined syntactically, whereas consciousness, thoughts, feelings, emotions and all the rest of it involve more than syntax. Those features, by definition, the computer is unable to duplicate.⁵⁸

Searle is guilty here of mixing his terminology in a very confusing manner. Ryle says of thinking

I discover that there are other minds in understanding what other people say and do. In making sense of what you say, in appreciating your jokes, in unmasking your chess-stratagems, in following your arguments and in hearing you pick holes in my arguments, I am not inferring to the workings of your mind, I am following them. Indeed we do not merely discover that there are other minds; we discover what specific qualities of intellect and character particular people have.⁵⁹

The concept of mind is a metaphor which enables us to describe how we manipulate these symbols which Searle designates as mere syntax. He talks about "getting from the syntax to the semantics" as if the signs (the words) were dispensable.

Like the man who is shown around the colleges of Oxford and then asks "But where is the University?", Searle sees all the workings of the mind in this robot, it talks, gives answers, tells jokes, misunderstands and is sad, he then asks us where its mind is. He says that the computer simulation of mental processes are no more mental processes, than computer simulations of storms are wet. In fact computers do not simulate mental processes, they simulate methods of reasoning, means of calculation etc., which were first devised in some other medium. It matters not one bit to the operation of the computer whether we call these processes thinking.

If I went to Disneyland to watch the Abraham Lincoln robot deliver the Gettysburg address I would not, following my previous line of reasoning, assume that it had a mind. Such a thought is irrelevant. I might however wonder as to its capacities as a robot. Could it play chess? could it kick a football? etc., etc., and I might well be disappointed if I was subsequently to find that it was not a robot at all. But due to a malfunction of the robot, had been replaced by an actor for the day. I might marvel at the actors skill in pretending to be a robot. These games are interesting because they challenge our categories of animate and inanimate. Van Vogt plays with such notions in his short story 'All the Loving Androids.'⁶⁰ In this story androids pretend to be people and people pretend to be androids. The androids are a kind of slave class vying for equality, and adopting guerilla tactics to achieve their aims. The story asks the question "Could androids be our equals in society?"

The answer is that they could (theoretically) be our intellectual and physical equal, but would not be accepted socially as equals. (The story baulks the questions by giving them inferior powers of reasoning). However, a perfectly functioning simulation of a human being is a challenge to our whole system of values. It asks the question "What do we define as living?" Searle obviously thinks that something capable of 'semantics' would qualify, he fails however to qualify the term, and it functions in his essay as 'soul', spirit, elan vital etc., might in a more theological treatise.

It is an interesting point that the 'behaviourist' attitude that Searle finds inadequate to the mind-body problem, as evinced by a study of its most powerful advocates, does not admit of the need for a biological model of brain processes. Wittgenstein in Zettel insists that there is no necessity that there should be a physiological counterpart of thought.

No supposition seems to me more natural than that there is no process in the brain correlated with associating or with things; so that it would be impossible to read off thought-processes from brain-processes....
If this upsets our concept of causality then it is high time it was upset.⁶¹

and in Lectures on Aesthetics he comments

Here is the point of behaviourism. It isn't that they deny there are feelings. But they say our description of behaviour is our description of feelings.⁶²

It is difficult to imagine that an android will feel pain in the same way as you or I feel pain, or get the same sensation as you or I get when we see a beautiful painting.

There is a tendency to talk about the 'effect of a work of art' - feelings, images, etc.

Does that mean if you gave a person the effects and removed the picture it would be all right? Surely (the) first thing is, you see the picture or say the words of a poem. Would a syringe which produces these effects on you do just as well as the picture?⁶³

Clearly if the android could expound knowledgeably about a painting, and give us insights into the work, we can see the issue of whether it has feelings is inappropriate. The mental images which Marcus Hester says we have when we read poetry, they are not the reason we read poetry. We do not argue with people to generate neural responses in their brains either. How the brain works is not relevant, except to brain surgeons. Searle conflates brain-processes with thought-processes. He makes the same mistake as Chomsky, in thinking that if you can locate the part of the brain which is responsible for our predisposition to 'universal grammar' we might then be able to answer such questions as "How does meaning arise from metaphor?" or other such semantic questions. In fact only analysis of the way we talk and behave, tells us about our thinking.

If someone wanted to check whether someone understands something, they might list factors which make it unlikely e.g., he can't read, he is innumerate, he had his brain removed yesterday. If the person nevertheless demonstrates his understanding such factors are irrelevant. That is they are irrelevant to the question "Does he understand?". They may however be of interest to neurosurgeons etc. Of similarly peripheral interest would be the fact that he turned out to be a robot.

The treatment of robots and computers in science fiction is the embodiment of the 'Heath Robinson' picture people have of the mind and understanding. Searle presents the apparently sophisticated version by assuming that we could have an android or robot that is indistinguishable from a human being. He asks what difference it would make, and gives the answer which science fiction writers have been giving for years. A robot has got no soul, he calls it semantics, but for all his protestations he fails to qualify the term. This is a kind of metaphysical solution, to a metaphysical problem. The impossibility of Searle's Chinese room example amuses AI specialists, because it is an odd kind of idea of what a mind is which generates it. Proposing an extra quality to minds and understanding that is outside the activity of social interaction, I have tried to show here is irrelevant to understanding understanding.

Similarly what we call consciousness is made up of these various characteristics; emotion, understanding, thinking, feeling.

Another very common way of thinking about the mind-body problem is to imagine that we could have direct access to people's minds. This popular concept has currency outside science fiction circles, and as we shall see is the picture which people have of being certain not only that someone has a mind, but is thinking and feeling what they say they are.

Telepathy: Thoughts without Words

Telepathy is a kind of picture of perfect communication. It imagines how it would be if we could look into peoples minds. Assuming the powers of our omniscient narrator, what kind of things we would expect to find? We often hear people say "I'd like to see what's going on in his head now." Science fiction stories often use the device of telepathy or extra-sensory perception to avoid language problems with aliens or as a useful gimmick in a tight situation.

The general theory is that as brain waves can be detected by a machine, and that machine might be able to translate those brain waves into something resembling that person's thought. Similarly if we could receive other peoples' brain waves we would be able to know what they were thinking. Alfred Bester in his novel The Demolished Man posits a society where an elite group of people have telepathic abilities, and extrapolates on "wide-screen Baroque" lines, the social consequences of such an eventuality. Ben Reich head of the vast Monarch corporation decides to murder his business rival Craye D'Courtney. The chief obstacle to this enterprise is the existence of the Esper Guild, the organisation of mind-readers, because of whom "there hasn't been a successful premeditated murder in seventy-nine years."

Espers make it impossible to conceal intent before murder. Or if Espers have been evaded before the murder, they make it impossible to conceal the guilt afterwards.⁶⁴

Espers are graded thus

An Esper 3 can peep the conscious level of a mind - can discover what a subject is thinking at the moment of thought.

2nd class Espers can penetrate beneath the conscious level of the mind to the preconscious.

The 1sts are capable of deep peeping, through the conscious and preconscious layers down to the unconscious the lowest levels of the mind. Primordial basic desires and so forth.⁶⁵

There are about 100,000 3rds, 10,000 2nds, and less than 1,000 1sts in the Guild. The Guild runs an Espers professional life. It trains them, grades them and sets ethical standards. They have an equivalent of the Hippocratic oath called the Esper Pledge. The punishment for breaking the pledge is ostracisation by the rest of the Guild, leaving the transgressor to live his life with normal people. This, Monarch's head of espionage likens to asking a normal person to live out his life in the company of deaf-mutes.

Reich bribes a 1st class Esper, Gus Tate, to help him in his plot. Tate runs "interference" for him against other peepers, provides intelligence and mind-blocks. Reich develops a temporary mind-block of his own by establishing in his mind a banal advertising jingle, capable of confusing any 3rd class peeper. The murder is duly committed, but D'Courtney's daughter, Barbara, witnesses the act and escapes. There follows layer upon layer of devilish intrigue, in which Reich and peeper Prefect Powell of the Psychotic Division, pit their wits and considerable resources in a race to find the girl. The essential point is that "peeped" evidence is not admissable in court, Reich must be trapped by hard evidence. The two antagonists, (the resources of the Guild and the resources of Monarch), set traps for each other, lay false leads, set up decoys, red herrings, feign defeat and generally chase each other round the solar system.

When the girl is found she is catatonic, of no use as a witness, we are privy to Powell's attempts at entering her psyche in an attempt to find more about her experience, and coax her back to consciousness.

He went down the black passages again towards the deep-seated furnace that was within the girl... that is within every man ... the timeless reservoir of psychic energy, reasonless, remorseless, seething with the never-ending search for satisfaction.⁶⁶

Powell becomes lost in the chaos of the girl's psyche. He is attempting to do what is normally done in psychoanalysis, to find the source of her anguish, he finds that she has transferred her affections to him, she has fallen in love with him

abruptly the image of Powell-Powerful-Protective-Paternal rushed at him, torrentially destructive. He stayed with it, grappling. The back of the head was D'Courtney's face. He followed the Janus image down to a blazing channel of doubles, pair, linkages and duplications to - Reich? Imposs - Yes, Ben Reich and the caricature of Barbara, linked side to side like Siamese twins,⁶⁷

Bester uses imagery and terminology from various psychoanalytic schools to portray the working of the id. What is revealed through this process is that Ben Reich is Barbara's brother. It is Reich's refusal to accept that he killed his father (D'Courtney) for anything other than financial reasons that causes his nightmare of the Man with No Face. The Demolished Man uses the Oedipus myth to establish the motive for the murder, "He wanted to destroy the hateful father who had rejected him".

The Espers in this novel do not just read minds, in the sense of requiring a language as a medium. They can receive emanations of anxiety, blood lust in a pure form, even from animals!

While in the jungle of the nature reserve on spaceland Powell

reached out on the TP Band, sensing, touching, feeling. There was nothing but blind fear, blind rage, blind instinct around him. The hippos, sodden and viscid... the crocodiles, deaf, angry, hungry ... swampbats, as furious as rhinoceri whose size they doubled.... A quarter of a mile off were the faint broadcasts of elephant, wapiti, giant cats⁶⁸

I wonder what Powell would have found if he had tried to look into an elephants psyche?

Feelings and thoughts, structured by myths are not the only way that Bester attempts to describe Extra-Sensory-Perception. In the 'Esper party' sequence he attempts to show how the TP chatter might form patterns analogous to the rhythmic and metrical patterns in poetry. He does this typographically⁶⁹ and later in the scene at the Guild Institute

In the lecture hall, a class of 3rds was earnestly weaving simple basket patterns while they discussed current events. There was one little overdue 2nd, a twelve-year-old, who was adding zig-zag ad libs to the dull discussion and peaking every zig with a spoken word. The words rhymed and were barbed comments on the speakers.⁷⁰

The skill with which Bester weaves together descriptions of the various levels of mind-reading, leaves us with the impression of a comprehensive view of what it might be like to possess an "extra-sensory Node" in the brain. He does not fall into the trap of attempting to describe the workings of the mind in the way that those concerned with the mind-body problem or the apparently intractable questions of artificial intelligence do.

The problem is insoluble because investigators are looking for the 'mechanics' of 'mental processes'.

The philosophers on the one hand deny that minds, like bodies, are subject to Laplacean determinism, while on the other hand are unable to formulate rules about how the mind works without resorting to some kind of determinism.

This confusion and a slavish adherence to determinism in physical systems leads Searle into his fruitless discussion of the status of free will in behavioural sciences. Searle attempts to get out of the usual "epistemological flaw of circularity" in his argument of what causes minds by postulating it as an emergent quality of the brain. Koestler makes a similar assertion in his The Ghost in the Machine when he postulates a hierarchical mental structure where descriptive methods at one level are not applicable at others⁷¹.

Bester manages to avoid the quicksand of "describing mental states" by taking on board a fairly unashamed Freudian vocabulary. What we discover about characters at the "conscious" and "preconscious" level of thinking, are of the nature of things they could tell us but would rather not. This foregrounds the "invasion of privacy" aspect of mind-reading. The degree of deception required in the everyday conduct of our affairs is emphasised by the examples of job interviews being conducted by peepers, and police officers being able to "peep" all those little things we would rather them not know. The essential point of Bester's book is that all a mind-reader is likely to find beyond that, is a never ending complexity of wishes, desires and motives, likely to confuse rather than clarify procedures.

This brings us back to Ryle's point that it is a mistake to think that we can know our own minds better than someone else's. The kinds of things that we can find out about other people's minds are very much the same as the kinds of things we can find out about our own, and in the case of mind-reading, if the methods of finding out these things are much the same, we are likely to experience a loss of identity, and the conviction that what are peeping is right and true is subject to much the same criteria as Freudian criteria, namely an appeal to what seems right and natural and the power of mythology.

There are no causal laws which we can call on in the operation of feelings, we can not set up experiments, and say "Yes" or "No", "this experiment was successful, this one was not."

Take Freud's view that anxiety is always a repetition in some way of the anxiety we felt at birth. He does not establish this by reference to evidence - for he could not do so. But it is an idea that has a marked attraction. It has the attraction that mythological explanations have, explanations which say that this is a repetition of something that has happened before.⁷²

Wittgenstein is not merely saying that Freudian techniques lack criteria, that sometimes the analysis may satisfy the patient but not the doctor, what he is saying is that often such "memories" as analysis evokes could easily be due to the analyst. The patient may be reassured, things might seem clearer to the patient, but the vocabulary and structure of the Freudian view provides descriptive powers which necessarily entail the myth.

Bester's treatment of telepathy is unusual in that it does not suggest that mind-reading would establish with any certainty what a person's feelings were.

If someone were in pain, I imagine that Bester's peepers would be able to establish such fairly quickly, but the various levels of consciousness need deeper probing. However, if a person were pretending to be in pain, or pretending sorrow, the mind reader would easily see the through the deceit. In this sense mind-reading appears to establish some kind of certainty. Interestingly it is only the things about which we have no doubt when we refer to ourselves, which can be established with certainty by the peepers. It makes no sense to say "I don't know if I'm in pain" but I can say "I don't know what I think".

Imagine you are in love. Are you in love all the time? Just for an hour a day? or ten minutes out of every hour? If someone were to read your mind at the wrong time he might never realize that you were in love. The Freudian mind-model which Bester subscribes to suggests that there are levels of the psyche which separate out a little like crude oil separates out into spirit and lubricant. The mind reader would have to probe into the lower levels to find out if you were in love. This image of the mind, effectively codified by Freud, is essentially misleading and gives rise to the notion that one might establish with some certainty a series of causes and mental events, which would allow one to talk about 'mental states' as if they were tangible things like the state of the weather. Wittgenstein finds Freud's theories full of "fishy thinking"⁷³, and whilst recognising what he calls his "scientific achievement" he says of Freud in a letter to Norman Malcolm,

...he never says what an enormous charm that the idea (of psycho-analysis) has for people, just as it has for Freud himself. There may be strong prejudices against uncovering something nasty, but sometimes it is infinitely more attractive than repulsive. Unless you think very clearly psycho-analysis is a dangerous & foul practice, & it's done no end of harm, & comparatively, very little good.⁷⁴

One of Wittgenstein's chief objections to Freud's methods was that taking physics as the ideal science, his approach allows us to imagine that laws of psychology are being formulated. It ignores the crucial point that the essence of mental phenomena is that there aren't any laws governing them. In a conversation with Rush-Rees, Wittgenstein asks of the interpretation of dreams how with free association we know where to stop, "where is the right solution?". Also if it is true that there is a dream language shouldn't it also be possible to reverse things and translate everyday life into a dream? As an example of how imprecise the whole idea of interpretation is in psycho-analysis, Wittgenstein asks us to imagine a cartoon featuring a caricature of Churchill and another character with a hammer and sickle emblazoned on him. Given that the caption is missing we would not say that there was only one possible caption.

The question is whether you would always be justified in assuming that there was some one joke or some one point which is the point the cartoon is making. Perhaps even the picture has no "right interpretation" at all. You might say: "There are indications - such as the two figures mentioned - which suggest that it has." And I might answer that perhaps those indications are all that there is.⁷⁵

Certain things in the picture might be open to interpretation, other things not. Wittgenstein suggests that the same might also be true of dreams, and he believes that to some extent Freud confuses interpretations with causes.

Freud asks "Are you asking me to believe that there is nothing which happens without a cause?" But this means nothing. If under 'cause' you include things like physiological causes, then we know nothing about these, and in any case they are not relevant to the question of interpretation.⁷⁶

"

This idea that philosophy is independent of empirical propositions is essential to Wittgenstein's approach even in the Tractatus. In his introduction to the 1913 'Notes on Logic' he says,

Philosophy gives no picture of reality, and can neither confirm nor confute scientific investigations.⁷⁷

and in the Philosophical Investigations he says

The problems are solved, not by giving new information, but by arranging what we have always known. Philosophy is a battle against the bewitchment of our intelligence by means of language.⁷⁸

We are misled by the inordinate importance which we attach to an image of how language works and are inclined to regard literal language as providing the model for the whole of language. We think of it as descriptive. Thus when we describe something the proposition appears to have the form "This is how things are"., Wittgenstein comments

That is the kind of proposition that one repeats to oneself countless times. One thinks that one is tracing the outline of a thing's nature over and over again, and one is merely tracing round the frame through which we look at it. The picture has held us captive.⁷⁹

The image which activates the idea of 'literal' language is that of words picturing reality, as if one could map language onto reality. Literal language thereby becomes a kind of extended metaphor in itself.

All of the 'philosophical nonsense' which I have noted in my various examples may be traced back to being misled by a picture. This picture is often embedded deep in the form of language.

Because the grammar of Freud's descriptions of mental phenomena is similar to the grammar of the description of things in the world, of objects and events, we formulate an image of a descriptive process similar to that of scientific procedures. This image entails the ascription of causes to mental events, just as we ascribe causes to physical events.

This misleading notion is the product of being captivated by a picture and of an inordinate fondness for causes, and a particular partiality for singular causes. When philosophers talk about 'the will' as a kind of 'prime mover' of intelligent activity, the fuel as it were driving all our actions, and they notice that they have not given a 'cause' for 'the will', as if it somehow appears from nowhere, it begins to worry them. They have, as Wittgenstein says, failed to give a meaning to one of their terms. The focus of Bester's second novel Tiger!Tiger!⁸⁰ (published in the U.S.A. as The Stars my Destination) is the will. The blind wilfulness of Gully Foyle in his thirst for revenge is set against the more prosaic, scientific, exercise of the will required in Jaunting and in exploding PyrE. In what is undoubtedly a tour-de-force in "Widescreen Baroque", Bester combines all the myths and cliches of science fiction in a classic space-opera. It is worth assembling these elements in order to form some idea of how all the philosophical formulas which I have identified can be made to cohere in the service of an ideal which is principally romantic; the supremacy of the imagination.

Will and Idea: Thinking the Impossible

The world of 2336 A.D. is a "golden age, a time of high adventure"; where all the "habitable worlds of the solar system were occupied"; where the Outer Satellites are at war with the Inner Planets; where the vast commercial clans form dynasties, liveried and encastled. Bester peoples it with fantastic figures; Olivia Presteign the albino "princess" blind to all but the "7,500 Angstroms to one millimeter wavelengths"; Saul Dagenham, whom a fission blast had turned radioactive, "transformed him into a twenty-fourth century 'Typhoid Mary'; Robin Wednesbury, a one-way telepath, who could "broadcast her thoughts to the world but could receive nothing."; and amidst all these improbable misfits is Gulliver Foyle, Mechanics Mate 3rd Class, "the stereotype common man".

Gully Foyle is turned uncommon, "kicked awake" by forces beyond his understanding. His lust for revenge for being left stranded in space, transforms him into a "walking cancer", "a liar, lecher, ghoul", his obsession with vengeance makes Foyle a deadly killer, a tiger amongst men.

Unbeknown to Foyle, the ship on which he was stranded, the Nomad, carried 20 pounds of PyrE, the most deadly explosive known to man. Thus as Foyle wreaks havoc in his relentless quest for revenge, he is pursued across the solar system by agents of the mighty Presteign and Inner Planets Intelligence, desperate to extract from him the location of the wrecked ship.

From here the plot proceeds in a manner not unlike The Count of Monte Christo, exchanging the trappings of seventeenth century French society for those of the twenty-fourth. The most remarkable development of this new age is "jaunting", "the transportation of oneself through space by an effort of the mind alone." We usually call it teleportation. The effect is named after a researcher named Jaunte whose colleagues, suspecting his ability, sealed him in an unbreakable crystal tank, filled it with water and smashed the valve handle.

Jaunte began to drown. Then he was outside the tank dripping and coughing explosively. He'd teleported again.⁸¹

Once the principles of teleportation were established it no longer took the threat of death to make a person jaunte,

Any person was capable of jaunting provided he developed two faculties, visualization and concentration. He had to visualize completely and precisely, the spot to which he desired to teleport himself; and he had to concentrate the latent energy of his mind into a single thrust to get him there. Above all he had to have faith... He had to believe he would jaunte.⁸²

Note that one just has to imagine where one wants to go and then will oneself there. Peoples' ability to jaunte varied from person to person, "but no jump could exceed a thousand miles."

Stylistically speaking teleportation is the spatial equivalent of the omniscient narrator. The ability to jump from one place to another is something we take for granted in a novel or a film, we expect our omniscient narrator also to be ubiquitous in space and time. And just as mind-reading provides the illusion of depth, teleportation provides the illusion of speed.

With "jaunte stages" set up all around the world, the characters move about the globe with dizzying speed. Bester visualises vividly the social consequences of this commonplace fantasy. "More spectacular than the change-over from horse and buggy to the gasoline age four centuries before," universal jaunting brought with it crashes, panics, famines and plagues. Crime waves swept the planets and satellites,

There came a hideous return to the worst prudery of Victorianism as society fought the sexual and moral dangers of jaunting with protocol and taboo.⁸³

Labyrinths and masking devices had to be set up to prevent unlawful jaunting, and a man's social position was displayed by his refusal to jaunte. Bester playfully depicts this cult of outmoded transport as he describes the guests arriving at one of Presteign's parties.

The sightseers buzzed and exclaimed as the famous and near-famous of clan and sept arrived by car, by coach, by litter, by every form of luxurious transportation.

The Colas arrived by band wagon. The Esso family (six sons, three daughters) was magnificent in a glass topped Greyhound bus. But Greyhound arrived (in an Edison Electric Runabout) hard on their heels....⁸⁴

Foyle arrives in his new identity of wealthy upstart Fourmyle of Ceres, his thirst for revenge keener after his long imprisonment in the jaunte-proof Gouffre Martel, and outdoes them all by arriving in a steam locomotive preceded by track-layers and a man on a white horse holding a large red flag. His entry into society assured Foyle falls in love with the "white princess", who turns out to be the person who gave the order to leave him stranded on the Nomad, and the object of his quest for vengeance. Thus emasculated, the tiger, its teeth drawn, and claws clipped, is at the mercy of Presteign and his cohorts, more determined than ever to get hold of PyrE, knowing that Foyle has it hidden.

Pyre it turns out is a pyrophoric alloy "releasing thermo-nuclear energy on the order of stellar Phoenix action", and brought to critical mass "Through Will and Idea", as the original energy was generated in the beginning of time"⁸⁵ Presteign explains.

When Foyle is thrust into a position of having to decide who to give this deadly substance to he balks the question and distributes it around the globe in a mad spread, crying to Dagenham and Yeovil

I've handed life and death back to the people who do the living and dying, The common man's been whipped and led long enough by driven men like us.... Compulsive men... Tiger men who can't help lashing the world before them. Who the hell are we to make decisions for the world just because we're compulsive? Let the world make its own choice between life and death. Why should we be saddled with the responsibility?⁸⁶

Foyle's attempt to provoke the masses to greatness, is founded on the belief that the Common man can be kicked awake like he was, and his abnegation of responsibility is set against the knowledge that Foyle, far from being the stereotype common man is the "new man" almost a God in the universe. His newly found ability to space-jaunte, gives him an even more awesome responsibility than Pyre.

Am I to teach the world how to space-jaunte and let us spread our freak show from galaxy to galaxy through all the universe?⁸⁷

he asks. Here Bester pushes the jaunting idea to its extreme by suggesting the possibility of teleportation through time. The figure of the burning man which has haunted Foyle throughout the book, turns out to be himself, time-jaunting in a desperate effort to escape from the inferno of St. Pat's Cathedral.

He went hurtling along the geodesical space-lines of the curving universe at the speed of thought which far exceeds that of light. His spatial velocity was so frightful that his time axis was twisted from the vertical line drawn from the past through Now to the Future.⁸⁸

His space jaunting takes him to the very edge of the universe, where thousands of light years from earth

He hung in space for a blinding moment, as helpless, as amazed and yet as inevitable as the first gilled creature to come out of the sea and hang gulping on a primeval beach in the dawn-history of life on earth.⁸⁹

In a remarkable feat of integration Bester has rounded up time-travel, teleportation, mind reading, identity crises, evolution, extra senses, god, religion, and the apocalypse and all the philosophical nonsense which this entails, with a style and panache which is precisely the reverse of what Amis remarks as typical science fiction. He says

nothing is more typical of science fiction than it presents what are at any rate interesting ideas, and sometimes even original ones, in terms of electrifying banality.⁹⁰

It is probably impertinent of me to remark on the banality of the message of Tiger!Tiger!, because its thrust is principally romantic. Indeed Patrick McCarthy seeks in it a revisionary perspective on Blake's 'The Tyger', and calls it

a visionary novel built upon Romantic assumptions about the relationship between the imagination and the external world. Unlike Arthur C. Clarke's Childhood's End - or even his 2001: A Space Odyssey, whose conclusion in some ways resembles that of Bester's novel - The Stars My Destination does not depend on forces outside man to bring about its apocalyptic breakthrough.⁹¹

This appears to be a fair assessment to the extent that Bester's novel conforms to the definition of romanticism which T.E. Hulme offers in 'Romanticism and Classicism'

that man, the individual, is an infinite reservoir of possibilities; and if you can so arrange society by the destruction of oppressive order then these possibilities will have a chance and you will get Progress.⁹²

Hulme's capitalisation of the word "Progress" seems to set his tongue firmly in his cheek, and gently suggests that romanticism has begun to parody itself. In consequence I find it difficult to take McCarthy's view seriously, and find Tiger!Tiger! a virtual caricature, not just of the romantic myth but of the archetypal science fiction novel.

In the book's refusal to resolve the paradoxes: Foyle's role as a figure of redemption through "viciousness" and selfishness; his offering to humanity the keys to hell (PyrE) as well as the keys to heaven (space-jaunting); McCarthy sees a "dynamic tension" essential to the Romantic myth. He concludes

if we find it difficult to evaluate Gully Foyle at the end of the novel, it is because Bester's concept of irony here is so thoroughly Romantic that we can arrive only at a paradox.⁹³

At the end of the book we are left with a vision of Foyle, huddled foetus like in the locker of the space-ship Nomad, watched over by the two "scientific people" Joseph and Moira. This Christ-in-the manger scene presages the "awakening" of Foyle and mankind to the "new frontier of the mind" that would "transform man and make him master of the universe".

This would as McCarthy suggests, indeed seem to parallel the position of Stephen Dedalus at the end of A Portrait of the Artist as a Young Man, and strengthen the case for considering the development of Foyle as an echo of the development of the artist/anti-hero which Joyce has established as the archetypal post-romantic figure of the 20th century.

The development of "jaunting" in Tiger!Tiger! is a symbol of man throwing off the shackles of technology, and outgrowing the scientific, mechanistic approach. That the transcendence of imagination is only possible through conflict, "the marriage of pinnacle freaks", is represented by Foyle's hedonistic and vengeful quest. In the central scene of the book Foyle is attempting to interrogate the captain of the Vorga in the Sklotsky colony,. Sklotskys are people who, believing that sensation is the root of all evil, have "submitted joyously to an operation that severed the sensory nervous system, and lived out their days without sight, sound, speech, smell, taste or touch."⁹⁴ Against the background of these corpse like creatures, writhing to the broadcasts of the telepath which Foyle has pressganged into helping him, the Burning Man appears.

The Burning Man is Foyle, the Tiger of the title tattooed, time travelling and experiencing synaesthesia.

that rare condition in which perception receives messages from the objective world and relays these messages to the brain, but there in the brain the sensory perceptions are confused with one another. So, in Foyle, sound registered at sight, motion registered as sound, colours became pain sensations, touch became taste and smell became touch.⁹⁵

It is the Burning Man who reads the movements of the Sklotsky, Lindsey Joyce, and translates them into the name Olivia Presteign. From this moment, when Foyle realises that the object of his hatred is also the object of his love he becomes a thinking man rather than a driven thing. Bester's depiction of synaesthesia is clearly derived from Rimbaud's 'Sonnet of the Vowels' and other such Symbolist poems. The notion that movements could "speak" is a curious reversal of the Symbolist belief that poems, in stimulating the other senses through rhythmic and metaphoric means, gave a kind of transcendent meaning to language. Foyle's entrapment in the "kaleidoscope of his own cross-senses" is the eventual trigger to his space-jaunting. Overall, Bester's use of synaesthesia is ambiguous. On the one hand it is Foyle's own synaesthesia which reveals to him that which he has quested, which emasculates him, and simultaneously raises him to become a member of society again. It is against the background of the "senseless" Sklotskys, refugees from experience, that Foyle finally realises that he must face himself, the Burning Man, and society. The appearance of the Burning Man is an epiphany, the manifestation of a God to Gentiles.

Bester in a stroke of brilliance, casts the clearest message of the book in the mouth of a robot disrupted by Dagenham's radiation. When Foyle asks the "haywire" machine what he should do with PyrE and his knowledge of space-jaunting, it answers that he should "go along with society", "You must teach society" it says. Foyle asks,

'To space-jaunte?' Why? Why reach out to the stars and galaxies?
What for?
'Because you're alive, sir.'

it answers, and when Foyle asks why a freak like himself should have to lead society it replies,

'You're all freaks, sir. But you have always been freaks. Life is a freak. That's its hope and glory.'
'Thank you very much.'
'My pleasure, sir.'
'You've saved the day.'
'Always a lovely day somewhere, sir,' the robot beamed. Then it fizzed jangled and collapsed.⁹⁶

The bartender robot, conditioned to respond "Always a lovely day somewhere, sir." to any sentence with "day" in it, is remarked by Foyle earlier in the scene,

'That's me,' he said, motioning to the robot. 'That's all of us. We prattle about free will, but we're nothing but response mechanical reaction in prescribed grooves.'⁹⁷

The robot has expressed the view that life and human beings are an accidental product of a "clockwork" universe, and that intelligent beings (or minds) are as much a freak as the apparent sense which the malfunctioning robot spouts in response to Foyle's questions. This prevalent view, relegating the mind to the status of a by-product of forces beyond our control, is at the bottom of a number of philosophies including mentalism, and the "argument from illusion," all of which ascribe superior status to the mind. Once the Earth has been relegated to the status of a planet circling the sun, the sun to the status of a minor star on the outer arm of a spiral galaxy nowhere near the centre of the universe, it's not surprising that philosophers and science fiction writers would like to mark out some special status for mental states and events. The image of man looking out from his frail body onto the universe, inevitably leads to the consideration that this power we have over our bodies, (to move our arms by our own free will) might be extended to the universe.

It is the ability of man to imagine himself elsewhere and elsewhen (as Bester puts it) which fuels this romantic view. Teleportation, telepathy, the belittling of machines, computers and artificial intelligence, crackpot theology and the suggestion that we are evolving into gods, all are present in the books I have discussed, and all would suggest that the mind somehow transcends the body, and is not subject to the laws of physics.

In a historical formal sense, since science fiction grew out of fantasy, it is not surprising that it should find itself so at odds with the philosophy of science. From this vantage the almost anti-romantic stance of writers like Clarke and Asimov appears rather muddled, their scientific "expertise" as Delany calls it, merely the run up to some spectacular philosophical own goals.

Bester's conclusion is philosophically similar to Searle's, that intelligence is biological, with the essential difference that Searle wouldn't have listened to the robot. In science fiction, scientific knowledge is no use in predicting the future. In science fiction, philosophical and logical sophistication is of use in creating controlled breaks of everyday rules.

The apparent disjunction which both writers attempt to resolve involves the observation that the mind has free will, (intentionality as Searle terms it), and must therefore be indeterminate, and that the body made up as it is of particles and charges, must obey the rules of physics and be determinate. Charles Hockett sees it from the other end of the telescope, for him determinate systems are exceptions to the rules.

Hockett maintains that as there are no completely reversible systems a system without entropy would not be a physical system. Moreover

Every observable physical system must, by definition, contain some information. For if there be some material system in which entropy has actually reached a steady maximum - not the stone lodged part way down the hill, but the stone that has rolled to the very bottom - so that it contains no information at all, then we have no way of knowing of its existence. For all intents and purposes such a system would form a universe of its own, separate from ours.⁹⁸

Hockett rather magnanimously allows that although the laws of thermodynamics are idealizations, their power is not diminished. His minor point is that determinism and statistical mechanics rest on the assumption of zero change in entropy, his major point is that any system without entropy is incapable of being known, and if there were no entropy, no decrease in information, we would have no means of organising information and therefore no history because "everything" would be known.

His argument interestingly does not depend on quantum mechanical theories, Heisenberg's uncertainty principle, or disproofs of Bell inequality, it depends on a definition of history which qualifies the term "determinate". Because information is always about the past he maintains that classical mechanics' "instantaneous observation" is impossible, and that this view of reality is only made possible by a concept of past, future, present, which sees the present as a kind of snapshot, and the 'flow' of time as a kind of film. A film which can be stopped, frozen at any moment.

To some extent I have come back to the point I started at at the beginning of this chapter. The way in which the language of "time words" leads us astray. I have suggested here that the notion of determinacy is related to this concept of time, and that it is the idea of determinacy in physical systems, counterpoised with what we call "free will" which causes many of the puzzles of the mind-body duality problem. However it makes no sense to speak of free will unless there is something determinate for that will to act on. To some extent things are only determinate because we want them to be so, we want to observe patterns and correspondence. Determinacy thus becomes a function of our concept of reality, which in turn is dependent upon our observation of reality, the idea of the world existing independently of human consciousness is abolished.⁹⁹

In The Sirens of Titan Kurt Vonnegut neatly satirises the idea of free will in Rumfoord's heated argument with the mechanical messenger, Salo from Tralfamadore.

"Nobody likes to think he's being used" said Rumfoord. "He'll put off admitting it to himself until the last possible instant." He smiled crookedly. "It may surprise you to learn that I take a certain pride, no matter how foolishly mistaken that pride may be, in making my own decisions for my own reasons."

"I'm not surprised," said Salo. "Oh?, said Rumfoord unpleasantly. "I should have thought it was too subtle an attitude for a machine to grasp."

This, surely was the low point in their relationship. Salo was a machine, since he had been designed and manufactured. He didn't conceal the fact. But Rumfoord had never used the fact as an insult before.¹⁰⁰

To set the scene in perspective, Rumfoord has here discovered, not merely that he has been used, but the "sickening" fact that everybody on earth has been used

"Everything that every Earthling has ever done has been warped by creatures on a planet one-hundred-and-fifty thousand light years away. The name of the planet is Tralfamadore."¹⁰¹

To the end of supplying a replacement part to a Tralfamadorian spaceship grounded on Titan, the beings of Tralfamadore had influenced just about every major event in earth's history. The beings of Tralfamadore it transpires are machines just like Salo.

Vonnegut further satirises the science fictional/philosophical idea of "the will" by having Salo's ship powered by a quantity of "the most powerful conceivable source of energy, UWB, or the Universal Will to Become." Thus treating this almost sacred capacity of human beings as if it were gasoline. It might be seen on reflection that that is exactly how "the will" is treated, in the way we use the word, and the way science fiction writers use it.

In both The Demolished Man and Tiger!Tiger! as well as in The Paradox Men, what is discovered accidentally through panic, ("jaunting", time-travelling etc.,) are found to be functions of human will and therefore controllable. "Will-power" is the watchword, Foyle's ability to control his emotions, symbolised by his tiger face, is an effort of will. We constantly talk about will as if it were something we have reserves of.

We imagine that "willing" PryE to explode, or ourselves to teleport, would be a bit like a child "trying" to go to the toilet; we would screw our faces up and think. And that failing to achieve the required end is a bit like failing to hit the bell on the "Test your strength" stall at the fair. However if I will my arm to raise, and it doesn't, I would not say that this was due to a lack of will-power, I would suspect that my body is failing to obey me in some way. As Wittgenstein says

One can say "I will, but my body does not obey me" - but not: "My will does not obey me." (Augustine)
But in the sense in which I cannot fail to will, I cannot try to will either.¹⁰²

It makes no sense to speak of "willing willing". Either I will something or I don't, and it doesn't take more will to lift a heavy object than a light one, it takes more strength. By thinking of willing as a "non-causal bringing-about", the driving force behind an idea or a wish, we are subject to the misleading analogy of the mind as a kind of machine driven by this "ethereal" substance will.

Vonnegut in The Sirens of Titan takes all the elements of the stereotypical science fiction novel and weaves them together into a seamless whole, and laughs like a drain at the whole thing.

James Mellard in an essay whose title is too long to mention here, remarks,

Vonnegut transcends the form by instilling life into its most transparent cliches, by reducing its formulas to absolute archetypes and by elevating its trite metaphysical theme to the status of a believable eschatology.¹⁰³

He finds that Sirens conforms with Northrop Frye's definition of "Naive" literature, namely that it is plainly written in a popular form. However I think that the naive appearance of Vonnegut's language is deceptive, and his use of the "formulas" of science fiction is structurally so coherent that by comparison any of the novels, in the tradition of which he is supposedly following, are about as structured as alphabet soup. To appreciate the full extent of Vonnegut's travesty in Sirens it would be useful to epitomise the archetypal science fiction novel. The mode I shall stereotype is the space-opera as that is the form which Sirens pastiches.

The story involves an apparently ordinary man whose search for identity brings him into conflict with the proto-fascist dynasty which rules the world/solar system. The elite of this corrupt power, in a plot to achieve domination of whatever territories remain, threaten to destroy the world with their machinations. Further they seek to usurp the power of the machine/computer which makes all the decisions, for their own purposes. Meanwhile the hero, who unbeknown to himself is at the nexus of the fate of the universe, and being controlled by some Machievellian character behind the scenes, falls in love with the current ruler's beautiful daughter. The ruler's plans for domination by the acquisition of some new and deadly weapon turn out to be a paltry thing compared to the transcendent secret which our hero contains within him.

A chase across the universe is obligatory, Mars and Venus should be used as local colour.

It is customary that in the midst of a nuclear holocaust our mind-reading/teleporting/time-travelling hero should discover his mission and that the mysterious manipulator of his fate is none other than himself, time-warped, mutated or in some other way re-incarnated, or, at the very least his surrogate father.

At this point the giant computer, so far the source of much worry due to its apparently limitless powers, turns out to be almost human after all, but destroys itself in its attempts to prove this. The hero, amidst much Christ imagery, becomes the saviour of the universe, and the question of whether he gets the girl is left open.

Statutory are: marvellous space-ships, made of wonderful new metals and capable of enormous speeds; endless plot twists to keep the reader guessing; beautiful girls brutalised; secret societies, crackpot sects and wonderful new religions. There should be no language problems.

The whole is a kind of philosophical detective story whereby we discover how civilisation began and how it is likely to end if we don't allow the development of homo-superior.

The motto of such science fiction might be a kind of reversal of Wittgenstein's dictum, and read something like,

Whereof we cannot speak, thereof must we speak.

The modus operandi extends what Samuel Delany calls "expertise", into something more (and less) than a narrative technique. In his essay 'Critical Methods: Speculative Fiction' Delany looks at "one of the narrative techniques that practically alone support science fiction:"

expertise - that method whereby an author, deploying a handful of esoteric facts, creates the impression that he, or more often a character in his story, is an expert in some given field¹⁰⁴.

He attributes the genesis of the technique to Huysmans and Poe. In fact what Delany is calling a narrative technique is the ancient and much venerated art of bullshitting. But, baffling the reader with science is a little different from baffling the reader with philosophy, because explaining the meaning of life is not like forensic science or deduction. Science-fiction however treats "the meaning of life" as if it can be discovered hidden in the grandfather clock or tucked under the carpet. Vonnegut lampoons this tendency throughout Sirens, beginning with Ransom K.Fern's request in connection with the sealed letter Malachi Constant's father had left in case of the collapse of his financial empire,

"And I will now, as an humble and loyal corporate servant, ask you for one small favour," said Fern, "If the letter seems to cast the vaguest light on what life may be about, I would appreciate your telephoning me at home."¹⁰⁵

Ransom K.Fern is cast as the most rational person in the book. That civilisation was set in motion to provide a spare part for a stranded Tralfamadorian space-ship, has a logic which might appeal to a rational man.

In the context of our archetypical space-opera Malachi Constant is our ordinary hero, his search for identity begins when he is brainwashed by the Martian army and he becomes Unk. The capitalist proto-fascist dynasty are the Rumfoords, prime representatives of the "one true American class", characterised by the title of a fictional book as The American Philosopher Kings". In the absence of a beautiful daughter our hero eventually falls in love with the next best thing, Winston Niles Rumfoord's dignified and virginal wife Beatrice. The nearest thing to a transcendent secret within our hero, is his eventual love for Beatrice and their child Chrono, whom he fathered in loveless rape on the trip to Mars.

Rumfoord himself appears on the face of it, to be the mysterious manipulator. Rumfoord and his dog Kazak are scattered through space and time by a phenomenon known as a chrono-synclastic infundibulum. They exist as wave phenomena "apparently pulsing in a distorted spiral with its origin in the Sun and its terminal in Betelgeuse." (pronounced beetle-juice).

Whenever a heavenly body intercepted their spirals,
Rumfoord and his dog materialized on that body.

For reasons as yet mysterious, the spirals of Rumfoord,
Kazak and Titan coincided exactly.¹⁰⁶

Rumfoord and his dog materialize on earth every fifty-nine days for the matter of a few hours, and as a side effect of this phenomena Rumfoord can not only read minds, but exists timelessly, i.e. he can see everything that has happened and everything that will happen.

Rumfoord masterminds the war with Mars, the effective suicide of 150,000 Martians (formerly earthlings), in order that the "world might unite as the Brotherhood of Man."

As he says in his Pocket History of Mars: "Any man who would change the world in a significant way must have showmanship, a genial willingness to shed other people's blood, and a plausible new religion to introduce during the brief period of repentance and horror that usually follows the bloodshed."¹⁰⁷

Rumfoord has all these qualities and he select Malachi Constant, alias Unk, to epitomise all that is corrupt about mankind and enshrines him as a "central symbol of wrong-headedness" in his new religion. Malachi Constant achieves his role as redeemer by being exiled to Titan in front of an enormous crowd "so that the Church of God the Utterly Indifferrent can have a drama of dignified self-sacrifice to remember and ponder through all time."¹⁰⁸ All the various threads of plot resolve themselves into a single dot in the climax of the story on Titan. There Malachi meets Salo, the mechanical messenger from Tralfamadore. Salo, out of love for his first and only friend Winston Niles Rumfoord overcomes his mechanical nature and contravenes his most fundamental order, he opens the message he has carried for half a million years. The message is a single dot, which in Tralfamadorian means "Greetings". On revealing this to be the "main point of the solar system", Salo, out of mechanical despair dismantles himself.

The theme of the "dot", the "point", and the idea of "being punctual" is overtured through the book. The gulf that separates Winston Niles Rumfoord from Malachi Constant is emphasised by Malachi's playful reaction to Beatrice's invitation asking him to be punctual.

Constant smiled at that - the warning to be punctual. To be punctual means to exist as a point, meant that as well as to arrive somewhere on time. Constant existed as a point - could not imagine what it would be like to exist in any other way.¹⁰⁹

Punctual means to "be at the right place at the right time." which is a euphemism for being lucky, and we are led to believe that Constant is the luckiest person in the world, or is up until he meets Rumfoord. Rumfoord we find, despite being chrono-synclastic infundibulated and a wave phenomenon rather than a punctual phenomenon, despite being able to see that "Everything that ever was always will be, and everything that ever will be always was.", still asks questions like;

"I should still like to know just what the main point of this Solar System episode has been."¹¹⁰

Salo knows that if Rumfoord were to find out that Stonehenge, the Great Wall of China and other great earth monuments were Tralfamodorian messages meaning "Replacement part being rushed with all possible speed.", he would show himself to be a "surprisingly parochial Earthling at heart." When Rumfoord is blasted off Titan by a sun-spot, Malachi Constant (whose name means "faithful messenger") and his mate Beatrice and their son Chrono are left alone to survive as best they can.

Here Vonnegut breaks with the space-opera formula. Having successfully re-invented it he adds an epilogue which earns him the reputation of sentimental. After the death of Beatrice, Constant reveals to the rebuilt Salo that he finally fell in love with Beatrice,

"Only an Earthling year ago," said Constant. "It took us that long to realize that a purpose of human life, no matter who is controlling it, is to love whoever is around to be loved."¹¹¹

The final scene sees Salo continuing on his 18 million year "fool's errand", and "Unk" being taken to paradise by his "best and only friend", Stony Stevenson. This final sentimental vision is the product of a hypnotic suggestion induced in Constant by Salo, and the final piece of Tralfamadorian meddling in earthling affairs before leaving them to their own "free will". The Tralfamadorians have no concept of free will we find in Slaughterhouse Five,

"If I hadn't spent so much time studying Earthlings," said the Tralfamadorian "I wouldn't have any idea what was meant by 'free will'. I've visited thirty-one inhabited planets in the universe, and I have studied reports on one hundred more. Only on Earth is there talk of free will."¹¹²

The Tralfamadorians of Slaughterhouse-Five are slightly different in character from the Tralfamadorians of Sirens. The former share to some extent Rumfoord's view of time, "seeing all time as you might see a stretch of Rocky Mountains". What is an affliction however to Rumfoord, is to the Tralfamadorians a way of life; a philosophy. When Billy retails to the Tralfamadorians the horrors he has seen perpetrated by Earthlings, and his fear that Earthlings might become the terrors of the Universe if not somehow stopped, Tralfamadorians rather than being impressed by his high ideals find the whole idea stupid. They know how the Universe ends, they say,

"We blow it up, experimenting with new fuels for our flying saucers. A Tralfamadorian test pilot presses a starter button, and the whole Universe disappears." So it goes. "If you know this," said Billy, "isn't there some way you can prevent it? Can't you keep the pilot from pressing the button?"

"He has always pressed it, and he always will. We always let him and we always will let him. The moment is structured that way."¹¹³

This is an important moment for Billy. Stupid as Billy is this fits in with his perception of things. The narrator characterises Billy and all his characters as "the listless playthings of enormous forces." The effect of war and the horrors of Dresden on Billy only confirm for him that he is, as the Tralfamadorian says, trapped like a bug in the amber of time.

Tralfamadorians, of course, say that every creature and plant in the Universe is a machine. It amuses them that so many Earthlings are offended by the idea of being machines.¹¹⁴

Billy is not offended by this notion of absolute determinism, and is enabled to make this great philosophical leap by an accident of fate. Billy has a partially Tralfamadorian view of things by virtue of being "unstuck in time". Billy is a temporal spastic. He has no control over where in his own particular space-time continuum he may emerge at any given moment. He experiences his whole life in a kaleidoscopic manner, moving backwards and forwards in a manner which effectively precludes any notion of "free will" at all. Thus we find that Slaughterhouse-Five, as it follows Billy's experiences, is structured in the "somewhat telegraphic schizophrenic manner of tales of the planet Tralfamadore". The novel is far from dead on Tralfamadore. We find that they all write like Alain Robbe-Grillet. Their books are composed of "clumps of symbols", each of which is a brief, urgent message, something like a telegram, describing a situation or scene. They are read all at once, not one after the other.

There isn't any particular relationship between all the messages, except that the author has chosen them carefully, so that, when seen all at once, they produce an image of life that is beautiful and surprising and deep. There is no beginning, no middle, no end, no suspense, no moral, no causes, no effects.¹¹⁵

John Somer, in an essay whose title is too silly to quote, spends much time developing a parallel between the narrative styles of Robbe-Grillet and the Vonnegut of Slaughterhouse-Five¹¹⁶. He appears not to notice that stylistically the two bear no comparison at all. Vonnegut does not pretend to be a formal innovator. However, his eclecticism allows him to borrow forms from any number of sources (e.g. film, science fiction, poems and limericks, encyclopedias, articles of propaganda etc.), and synthesise them into a cohesive whole. The "flashback" technique of Slaughterhouse-Five is justified by Billy's unfortunate affliction, and integrated into the texture of the book by its relation to the main theme of the piece. It does not serve as a device to obfuscate an otherwise banal plot, as in any number of Nick Roeg films, and it is not a means of maintaining suspense, as in any number of detective novels. Vonnegut has taken the hackneyed old science-fictional fascination with time, and rather than invite us to be awed at the paradoxes he can generate, he has used it to provide a perspective on something genuinely awe-inspiring; the massacre of the greatest number of human beings in the shortest time at Dresden. In Slaughterhouse Five Vonnegut is demonstrating that our experience of the world is entirely at odds with the doctrine of free will, which would seem to imply, in the words of Howard W. Campbell, Jr., that the poor "have no one to blame for their misery but themselves."¹¹⁷ and that if you find yourself at the bottom of the heap you probably deserve to be there.

What Billy finds is that whether you live or die, whether you suffer or not, whether you become rich or lose everything, whether you end up on a strange planet caged in a zoo with a movie star, or get shot for looting at the scene of the greatest carnage in human history, is a matter of complete indifference to a putative God, and entirely outside your power to control.

Further the kind of perspective which the chrono-synclastic infundibulated Rumfoord attains, "where all the different kinds of truths fit together"¹¹⁸, and the Tralfamadorian view of things, don't make wars any less horrible, and they still remain as Vonnegut declares at the beginning of the book "as easy to stop as glaciers."

The only way to remain sane in an insane world it seems, is to keep telling yourself little lies, and the occasional whopper as well. This is advocated in Cat's Cradle where the religion of Bokonism is invented. The book proceeds with a warning,

Anyone unable to understand how a useful religion can be founded on lies will not understand this book either.¹¹⁹

The religious answer to impending apocalypse is a familiar one. In Cat's Cradle the apocalypse comes anyway. Billy Pilgrim on the other hand has already seen the apocalypse. He and Eliot Rosewater "found life meaningless, partly because of what they had seen in war."

So they were trying to re-invent themselves and their universe. Science fiction was a big help.¹²⁰

Rosewater is heard to say to one of the psychiatrists in the veterans hospital,

"I think you guys are going to have to come up with a lot of wonderful new lies, or people just aren't going to want to go on living."¹²¹

The old lies it seems aren't enough any more. This is demonstrated through the example of one of Kilgore Trout's novels called The Gospel from Outer Space. This fictional piece of science fiction is a re-telling of the new testament story where Jesus is not really the "Son of the Most Powerful Being in the Universe", but emphasises the fact that Jesus was a nobody, a complete bum who just happened to say a lot of "lovely and puzzling things." He gets nailed to a cross anyway, but at the last minute there is thunder and lightning and the voice of God declares that he is adopting the bum as his son with complete "Son of the Creator of the Universe" powers and privileges.

God said this From this moment on, He will punish horribly anybody who torments a bum who has no connections.¹²²

This moral, our narrator declares, is quite different from the moral which the Gospels actually teach because whereas they appear to teach us to be merciful "even to the lowest of the low", what they actually teach is this,

Before you kill somebody, make absolutely sure he isn't well connected.¹²³

Kilgore Trout's other stories similarly update old lies. Even the Tralfamadorians, we have seen, have a flourishing fiction market and just as they ignore all the unpleasant moments in time, "simply don't look at them", they are only interested in "marvellous moments" in their books. Slaughterhouse-Five is, unlike the Tralfamadorian novel, a very moral book.

With the notable exception of his assertion that people in the 20th century still need some kind of God, Vonnegut is entirely playful in the way he evokes the philosophical problems which have proven such deep and serious matters for the writers which precede him. In a recent interview Vonnegut admits that the science fictional passages in Slaughterhouse-Five were largely provided for "light relief" and to provide another perspective on the central concern of the book, the bombing of Dresden. His conclusion, seemingly foregone, is that coming to terms with the mysteries of time and the universe is a small thing compared to finding a place in the scheme of things for something as "large" as the senseless massacre of so many human beings. Humour becomes the only safe means of dealing with it.

The writers whom I have dealt with in this chapter, with the obvious exception of both Vonnegut and Bester, have displayed an absence of humour which would be remarkable if it was not absolutely typical of the genre. It is clear that much of Vonnegut's humour is at the expense of these writers. Vonnegut establishes thereby an unequivocal stance with regard to the generic ghetto which I have attempted to characterise in this chapter. His humour generates a gap between his and other science fictional work. Philip K. Dick on the hand has a more integrated science fictional approach. His parody of the conventions of science fiction establishes him as a writer determined to expand the limits of the genre, and transform the ghetto.

CHAPTER THREE

The Epistemological Excursions of Philip K. Dick

Speculation on the foundations of knowledge seems an appropriate activity for science fiction. Even if science itself remains shy of epistemological debate, the limits of thought, knowledge and understanding remain for philosophers a never-ending source of dispute. Given the correspondences which I have noted between the interests of philosophers and science fiction writers, and given that science fiction is expected to "boldly go where no man has gone before", these areas form the thematic basis for many a science fiction story. Not surprisingly these epistemological excursions suffer from the same linguistic ills as many of the other philosophical issues which science fiction writers address. Further, because of the 'essential' nature of the questions asked, epistemology tends to involve more tail-chasing and regression than any other area of philosophy.

The chief reason for this is that in asking questions about the foundations of knowledge, philosophers also appear to cast doubt upon the reliability of their tools. Language and logic itself are called into question. In science fiction these doubts may be established, in a first contact story for example, by suggesting the alienness of the intelligence being established. In Solaris¹, Lem establishes the futility of the various disciplines which comprise the science of solaristics, and as such seems to be indicating where the limits of knowledge and understanding lie.

At first blush this appears a rather dismal conclusion to arrive at given the infinite variety of intelligences mankind is likely to engage in its quest of discovery among the stars.

Lem's dramatisation of this quest, whatever his conclusion, does not merely imagine an alien intelligence, and then dismiss it as unintelligible, that would be an exercise in tautology. Lem imagines what it would be like to confront such an intelligence, in terms of what such an event might be able to tell us about the foundations and limits of knowledge. Even if science fiction cannot answer the questions of epistemologists, it remains an essential part of its character that it tries to.

In the last chapter I showed how science fiction which takes time or identity as its subject will invariably find itself formulating paradoxes or playing intellectual games. Here I would like to consider whether there is a qualitative difference between science fiction of the paradox and non-paradox kind. Clearly it ought to be possible to distinguish the two using the various approaches outlined by linguistic philosophers. The task would seem to involve identifying a series of philosophical positions in various science fiction texts which have their basis in linguistic tangles, and then establishing the role of such ideas in the development of the tale.

It is an essential part of science fiction that it extrapolates premises of scientific development, social change or cosmology. Such extrapolations will invariably involve one or all of space-travel, time-travel, genetic engineering, robots and new intelligences.

Clearly one of the main obstacles to being considered seriously is the comic-book associations which such characteristics of the genre continue to have, even after a quarter of a century of space flight. Thus one may be forgiven for a certain confusion as to the seriousness of a piece of science fiction, even prior to addressing the various issues of linguistic philosophy to it. For these observations on the philosophical content of science fiction to have any value, a method of applying them will need to be established. It ought then to be possible to distinguish serious science fiction from the frivolous kind. But, as Wittgenstein points out, it is not always easy or possible to say exactly where we can say that we are misled by language². Wittgenstein's approach furthermore, does not include a formula for establishing such criteria. There is not the equivalent of a litmus test which we can conduct. What he does provide are series of methods and procedures, a discipline, which focuses on language and specific words with a view to clarifying the nature and sense of the 'philosophical' question.

From this perspective, it is possible to see how Wittgenstein and Ryle's emphasis on 'ordinary language' may be seen as an answer to Moore in that it seeks to qualify the underpinnings of 'common-sense'. This emphasis does not attempt to establish an ideal language, as is commonly thought. Neither does it prefer a view that only words which refer to concrete objects, events and experiences have meaning. Quite the contrary, such a view of language is misleading in itself. The reason 'abstract' thought tends to lead to confusion and paradox is often because the purpose of such thinking is ill defined. It is often, as Wittgenstein terms it "language without work to do".³

Thus, one might describe science fiction as an experiment, a thought experiment if you will, which because the experimenter is unclear about what he is trying to demonstrate, cannot be pronounced successful or unsuccessful. The authors of my second chapter fell variously into the traps of being misled by metaphors and by models of the mind and of language. The object of their quest often turns out to be a mirage. Often, it is evident, they are happy merely to have quested. Thus with the question of seriousness, the authors views cannot be considered reliable.

Van Vogt, for example, in his introduction to The World of Null-A,⁴ clearly considered that his meditations on problems of identity and memory, are a contribution to the philosophy of mind. Similarly, Aldiss's 'Man in his Time'⁵ expounds a psychological view of time which attempts to offer an alternative model to that of science. To this extent, both these authors have taken on the declared task of science fiction and are attempting to provide a conceptual framework for the extrapolation of novel scientific, philosophical and cosmological speculations. My observation that they have been led astray, bewitched by language, provides a level of description which, despite their intent, shows that their speculations are in some respects frivolous.

Additionally, the approach which I am suggesting is complicated by the use of 'frivolous' devices such as time-travel, as a means of establishing a more prosaic point. Wells' Time Machine is a good early example of such a tale. Later writers, such as Harness and Aldiss are torn between treating time-travel as a serious possibility and using it as a narrative device.

Science fiction without time-travel, mind-reading, androids and all the other nonsense barely earns the name. These narrative props almost define the genre. They, like pantomime dames, gothic mansions and nazi gold, are conventions. We do not normally expect that the pantomime, gothic novel or adventure yarn, will enlighten us about transvestism, architecture or metallurgy. Science fiction does.

In a way which would be quite inappropriate in pantomime, farce or western, science fiction sets out to examine the scientific and philosophical credentials of its accidents of structure. In this respect, science fiction has a lot in common with the historical novel, which whilst entertaining us with a costume drama seeks to elucidate and enlighten us on political, economic and social history. Inevitably the crystallization of a genre's traits gives rise to parody and pastiche, and eventually to complete self-parody in the mature form of the genre. Thus it retains the apparently frivolous aspects of its forebears whilst developing new intellectual and literary criteria. When one uses the pantomime form to debate sexual roles, the detective novel form to comment on social evils, or as with The Sirens of Titan, the space-opera form to scrutinise technological evils, the frivolity becomes decadence, the decadence becomes ironic, and irony becomes satire. If, as I suggested in the last chapter, the author appears to be satirizing the genre he is ostensibly writing within, the question of tone becomes simultaneously difficult and crucial.

Lem comments,

Sometimes the dissociating agency consists in chemical substances (of the hallucinogenic type - thus in The Three Stigmata of Palmer Eldritch); sometimes in "cold-sleep technique" (as precisely in Ubik); sometimes (as in Now Wait for Last Year) in a combination of narcotics and "parallel worlds". The end effect is always the same: distinguishing between waking reality and visions proves to be impossible. The technical aspect of this phenomenon is fairly inessential - ... The essential point is that a world equipped with the means of splitting perceived reality into indistinguishable likenesses of itself creates practical dilemmas that are known only to the theoretical speculations of philosophy. This is a world in which, so to speak, this philosophy goes out into the street and becomes for every ordinary mortal no less of burning question than is for us the threatened destruction of the biosphere.⁸

These "dilemmas that are known only to the theoretical speculations of philosophy" are loosely identifiable with those that I outlined as the declared province of just about every other science-fiction writer. Time is reversed, identities are blurred, and God manifests himself.

Dick's treatment of these themes is essentially parodic, but it is not the same attitude which Vonnegut brings to bear. Vonnegut, as we have seen, derides these great philosophical issues by manifestly making them the servants of a ridiculous plot. His concern is not philosophy, or even science fiction, it is corruption, madness and inhumanity. Dick on the other hand allows his often pathetic characters to limply speculate on such philosophies through being thrown into situations where it appears their speculations might have a practical application.

This evidently has interesting implications for the thesis, that it is as it were the 'idleness', the 'lack of application' of philosophical thought which leads it astray.

When philosophy as Lem terms it 'goes out into the street' it ceases to be philosophy. Philosophical statements, according to Wittgenstein cannot be empirical statements. Empirical statements are about things in the world, and such statements are verifiable only by observation and experiment. Philosophy treats of the form of these statements or propositions, it describes rather than explains. The essential aspect of what he calls 'philosophical grammar' is that it imparts no information about the world. Clearly if philosophical statements are not empirical statements, that is, are verifiable without reference to the world and without observation and experiment; if the various situations which philosophers imagine, such that I cannot be sure that a person is not a robot, or which direction time runs, etc; if these imagined props for philosophical points become reality; if the sceptical doubts are confirmed, what happens to the 'philosophical' question, and more importantly, what happens to my thesis that it is the characteristic lack of 'use' of philosophical language which leads philosophers and science fiction writers into fruitless areas of investigation? Dick's explorations of 'concrete epistemology' challenge the application of these linguistic criteria and are an extreme test of my hypothesis.

It is difficult when using linguistic philosophy to do anything other than describe the misuses of language and errors of thinking which characterise science fiction and philosophy. That is, it is difficult to find virtue using the techniques of Wittgenstein and Ryle. My stance, therefore appears more hostile to science fiction as a whole than it is. Finding in Dick, a writer who largely avoids the linguistic traps, leaves me without a test to apply because the test merely finds fault.

Consequently, I must make comparisons with authors who in one way or another fail, such that I can show where Dick succeeds. This task is complicated by the fact that Dick is often parodying the authors with whom I am comparing him. This is certainly true of Van Vogt and Pohl. Dick's deployment of time travel, identity problems, artificial intelligence, etc., invariably partake in a degree of humour at the expense of science fiction's pulp pedigree. The reader is quite justified in suspecting that Dick is merely disguising well worn cliches in a cloak of narrative confusion. With Harness, we found that although The Paradox Men was a reworking of some fairly old themes, a certain finesse distinguished the piece, a facility with the time travel device and some ingenious scenarios.

Bester similarly takes a rag-bag of literary and science fictional myths and weaves them into a kind of detective/adventure story. Vonnegut, we have seen parodies the space opera in Sirens, yet still maintains a serious intent. Clearly all of the foregoing are some combination of parody, pastiche, satire or plagiarism.

Without a reasonably intimate knowledge of the genre, it is not always easy to discern what the mix is. That is, without the background knowledge of 'sci-fi' it is not always easy to judge the tone. The emphasis on style and form in literary analysis which has been the legacy of modernism, ought to leave us particularly well equipped to deal with Dick's tonal complexity on a purely formal basis. Indeed the structuralist school of science fiction criticism whose organ is the journal Science-Fiction Studies, and whose various methods I attacked in my first chapter, would hold that "structuralism and semiology are not only important but actually the obligatory modes for criticising SF".⁹ I share Greenland's view that such a programme is extreme and tends to render science fiction as a sub-genre of structuralism. I have examined the 'structuralist' claims for a special status for the language of science fiction and found them wanting. Clearly there are linguistic issues to be addressed, as I showed in my last chapter, and as I have suggested, the later form of the genre presents us with stylistic problems which can only be settled through some criteria of aesthetic appreciation. In my last chapter, my emphasis on the philosophical content and subject matter suggested the grounds for intellectual criteria. I would like now to indicate formal criteria on the basis of an approach through linguistic philosophy.

Before I look at texts in detail, I would like to suggest an analogy, drawn from philosophy, which will clarify my procedure. In On Certainty, Wittgenstein dissects various uses of the words "know" and "knowledge" and shows that the theory of knowledge by turns falls victim to and exploits their various shades of meaning. In answer to Moore's 'Proof of an External World' and 'A Defence of Common Sense',¹⁰ Wittgenstein dissects a few of Moore's propositions "every one of which he claims to know with certainty to be true". These 'Moore-type' propositions are of the following kind and purport to provide a general description of the universe based on the common sense view. They are that there exists,

and has for some time existed, a human body which is his body; that during the time that it has existed, this body has been 'in contact with or not far from the surface of the earth', that there have existed many other things, 'also having shape and size in three dimensions',.....that the earth has existed for many years before he was born, and that during many of those years a large number of human bodies had at every moment been alive on it, and had, in very many cases, ceased to exist before he was born.¹¹

He further asserts that he has had experiences, perceived his own body in relation to other things in his environment, has imagined things and had dreams without believing their reality, and that there are many other human beings who would concur with him with regard to the propositions listed. All these statements have the form of empirical statements about the world, and are directed against various shades of idealist philosophy.

Wittgenstein's answer to Moore is conducted, as Kenny points out, in the form of a "three cornered argument with Moore and the Cartesian sceptic". He remarks,

Wittgenstein thought that Moore was right against Descartes in claiming that some propositions about the external world (e.g. 'This is a chair') could have the same epistemological status as mathematical propositions and propositions about sense-data. But he thought that Moore was wrong in thinking that these propositions provided a proof of the external world, and indeed wrong in thinking that he knew the propositions at all: not because the propositions were false, but because the claim to knowledge of them was senseless. Both Moore and the sceptic, he claimed, misunderstood the nature of doubt, knowledge and certainty in several ways.¹²

Wittgenstein, by showing the meaninglessness of the sceptic's procedure simultaneously casts doubt on the propositions which Moore uses to refute the sceptic. He begins with an example,

"I know that I am a human being". In order to see how unclear the sense of this proposition is, consider its negation. At most it might be taken to mean "I know I have the organs of a human". (E.g. a brain which, after all, no one has ever yet seen). But what about such a proposition as "I know I have a brain"? Can I doubt it? Grounds for doubt are lacking! Everything speaks in its favour, nothing against it. Nevertheless, it is imaginable that my skull should turn out empty when it was operated on.¹³

Because grounds for doubt are lacking, Wittgenstein believes that Moore type propositions are a misuse of the expression "I know". In the last entry in On Certainty, he asks if it is possible to doubt whether oneself has flown from America to England within the last few days,

"But even in such cases if I can't be mistaken, isn't it possible that I'm drugged?" If I am and if the drug has taken away my consciousness, then I am not now really talking and thinking. I cannot seriously suppose that I am at this moment dreaming. Someone who, dreaming, says "I am dreaming", even if he speaks audibly in doing so, is no more right than if he said in his dreams "it is raining", while it was in fact raining. Even if his dream were actually connected with the noise of the rain.¹⁴

This last example shows just how mistaken the dogmatic behaviourist view of Wittgenstein is. Doubt which springs from the suggestion that one may be drugged, or dreaming, is by definition unverifiable and thereby an inadmissible doubt, i.e. it precludes knowledge.

Wittgenstein's approach, in his later work, to these seemingly intractable problems of epistemology is characteristically difficult, yet simultaneously straightforward. His argument hinges on the assertion that where doubt is possible knowledge must also be possible. Things which we cannot doubt we therefore cannot say we have knowledge of. He attacks Moore's common-sense propositions for a number of reasons, notably because they lack an appropriate context. Other propositions about which we would say we cannot be mistaken he puts into another category.

If I say "We assume that the earth has existed for many years past" or something similar, then of course it sounds strange that we should assume such a thing. But in the entire system of our language-games it belongs to the foundations. The assumption, one might say forms the basis of action, and therefore, naturally, of thought.¹⁵

Wittgenstein is saying that when it comes to answering the sceptic's questions, instead of declaring him a madman, we are to some extent playing the madman's game.

The ways that we talk a "sane" person out of a crazy idea, and the ways we talk a crazy person out of a crazy idea, are very different. Thus although one can easily find a context for statements like "I know that I have always been near the surface of the earth." or "I know that I am a human being", Wittgenstein believes that in imagining such a context the statement loses "everything about it that is philosophically astonishing." I think perhaps Wittgenstein might have said "loses everything about it that is epistemologically astonishing".

These Moore-type statements which appear to be inductive in fact play a purely formal role in the language, because they are beyond epistemological doubt. Agreement on these is what makes epistemological doubt possible.

When Moore says he knows such and such, he is really enumerating a lot of empirical propositions which we affirm without special testing; propositions, that is, which have a peculiar logical role in the system of our empirical propositions.¹⁶

Wittgenstein goes on to say that the assurance that Moore knows these things is uninteresting in itself, but that the examples are interesting because they have "a similar role in the system of our empirical judgements".¹⁷ This "system" is not something that is "learned" it is "something that a human being acquires by means of observation and instruction". It is important however that such inherited background assumptions are subject to change, however slow that change might be.

I should like to say: Moore does not know what he asserts he knows, but it stands fast for him, and also for me: regarding it as absolutely solid is part of the method of doubt and enquiry.

I do not explicitly learn the propositions that stand fast for me, I can discover them subsequently like the axis is not fixed in the sense that anything holds it fast, but the movement around it determines its immobility.¹⁸

Wittgenstein is constantly asking what it would be like if something unusual happened; if houses turned to steam¹⁹ or cars grew out of the ground.²⁰ If such a thing was observed once, one might conclude that it was an hallucination or some such thing, if it constantly recurred, that is if houses always turned to steam, and cars always grew out of the ground, our foundations or judgement might indeed be shifted. The axis would have shifted. The analogy which I wish to press here asks you to consider that the various axiomatically science fictional situations of time-travel, etc., which appear to be propositions of an empirical nature, are in fact Moore-type propositions. That is, that in science fiction which addresses epistemological issues, such issues which appear to work at the level of content, in fact play a purely formal role.

In consideration of the stylistic similarity of Molly's interior monologue in Ulysses, and Goethe's early-morning monologue in Lotte in Weimar, Lukacs makes a similar point. He observes that despite the stylistic similarity "it is not easy to think of any two novels more basically dissimilar",²¹ and concludes that an "exclusive emphasis on formal matters can lead to serious misunderstanding of the character of the artist's work".²²

He suggests a compromise which qualifies the distinction between 'form' and 'content'.

The distinctions that concern us are not those between stylistic 'techniques' in the formalistic sense. It is the view of the world, the ideology or weltanschauung underlying a writer's work, that counts. And it is the writer's attempt to reproduce this view of the world which constitutes his 'intention' and is the formative principle underlying the style of a given piece of writing. Looked at in this way, style ceases to be a formalistic category. Rather, it is rooted in content; it is the specific form of a specific content.²³

Lukacs goes on to argue that the ontology on which the image of man in modernist literature is based, that of man as a solitary being, "incapable of meaningful relationships", is the content of the formal techniques of modernist. The chaos and shifting perspectives serving to emphasise a fundamental disassociation from reality. The individuality that in traditional realism is presented as a feature of the characters' interaction with society; the solitariness that is a specific "social fate", is in modernist literature a "universal condition humaine". He cites the "mood of total impotence, of paralysis in the face of the unintelligible power of circumstances" which informs the work of Kafka, as the extreme of this tendency.

If one were to press the analogy with science fiction, modernism might seem a very parochial movement after all. The "ideology of modernism" extended to science fiction, presents this solitary human condition as species specific.

One is encouraged to regard the whole of the human race as a social individual, ranged against the incomprehensible vastness of the universe. The collective solipsism which is the world view of a specific science fiction text will invariably emphasise man's isolation in the universe. I will return to this point when discussing the influence of the 'new wave' writers in my next chapter.

The emphasis on the formal role of language which characterizes modern criticism focuses on the rule governed nature of reading. The formal rules simultaneously make possible invention, and as Empson suggests²⁴, impose limits on it. Thus it is not the fact of breaking the rules that is important, it is how they are broken. The literary critic without an intimate understanding of the conventions and forms which characterise a genre will find himself applying an ill-fitting set of aesthetic criteria. When structuralists write about the ways in which poetry undermines the functions of ordinary language, a lack of clarity about how the rules of language are applied leads them to advocate the breaking of unspecific rules. It is as if, having done something which one thinks ought to be wrong, one retrospectively invents the rule or statute defining the offence. One really ought to know what the rule is before one breaks it. Clearly, Moore's statements that he knew he had a hand, that he knew he was a human being, etc., seemed, and still seem to some, to break several of the rules of epistemological enquiry. By refuting so directly the sceptical doubts which give rise to philosophical and epistemological inquiry, Moore appears to be making an important move in the game.

It is as Ayer points out, important to remember that, unlike Wittgenstein, Moore believed that philosophical problems were genuine and as such were capable of being solved.²⁵

Wittgenstein's demonstration that many of Moore's statements purportedly refuting the Cartesian sceptic, are merely part of the formal framework that make doubt, including epistemological doubt, possible, reduces these propositions to the status of interesting truisms.

Descartes in his Meditations doubts the existence of material things, his own body, and even the truth of logic and mathematics. Kenny points out that this 'radical' Cartesian doubt is argued for in three stages.

first, the senses have often deceived him in the past; second, he cannot know that he is not dreaming; third, it may be that he is the plaything of a powerful and malevolent spirit who is deceiving him.²⁶

Invariably, in Dick's stories, one or all of the protagonists have their doubts confirmed on one or all of these stages. In The Three Stigmata of Palmer Eldritch the characters are increasingly in doubt as to whether they are under the influence of the hallucinogenic drug, Chew-Z, they are therefore unable to trust their perceptions and are, it eventually transpires, the 'playthings' of the god-like Palmer Eldritch. Thus, typically, Dick's characters find themselves in the position of involuntary sceptics. They formulate the questions of classical epistemology, not through an inordinate fondness for metaphysics, but because of some cataclysm or misfortune which materially affects their lives.

They ask questions like "How do I know I am not dreaming all this?" because they find themselves suddenly in a world which is not consistent with what they normally experience as reality. In Ubik, Joe Chip begins to suspect that he is dead. The characters in Time Out of Joint prove to be quite justified in not trusting their memories, and the question "How do I know I exist?" assumes quite different aspects when asked by Rachel Rosen, Joe Chip and Barney Mayerson. Rarely has epistemology seemed so urgent, rarely outside the insane asylum. I would like now to examine how, mired as they are in the epistemological swamp, Dick's characters manage to avoid insanity and despair. If you can't trust your senses or your memory, if you have no idea whether what you face is real or an illusion, what basis is there for action? How do you make a decision?

The Three Stigmata of Cartesian Doubt: Dreams, Demons and Deceit

The characters in The Three Stigmata of Palmer Eldritch are originally in dispute about the status of their experience when under the influence of the translation drug Can-D. The argument takes the form of the old catholic debate about transubstantiation. Does the bread and wine really turn into the flesh and blood of Christ during the mass? The colonists on Mars ask "Do we really go to Earth when we take Can-D?"

However, they are aware that they are participating in an illusion, but the case with the hovellists on Mars is that the illusion is far better than reality. Can-D is mostly used by colonists drafted to the barren wastes of Mars to live in dreary hovels. Can-D is a translation drug. Whilst under the influence of the drug, users can take on another identity in another time or place, and if they wish fuse with other people also taking the drug. The effect is reminiscent of that which the Mercerites experience in Do Androids Dream of Electric Sheep? The use of the drug, although it is illegal, is quite ritualised, and instead of taking the drug in a vacuum as it were, the hovellists use artificial aids to define the environment into which they would like to translate themselves. Perky Pat Layouts are the dominant aid used with Can-D. They are elaborate dolls-houses (clearly based on the Barbie Doll) full of the miniaturised trappings of the Californian lifestyle prevalent before soaring temperatures made life on Earth so unpleasant. Under the influence of the drug Can-D, users take on either the role of Perky Pat or her boyfriend Walt, and live briefly within the layout so painstakingly and expensively maintained.

Thus when Sam Regan takes the drug he becomes Walt. But identification is not complete. When Walt goes to the shaving mirror he sees a note written in his own hand.

THIS IS AN ILLUSION. YOU ARE SAM REGAN, A COLONIST ON MARS. MAKE USE OF YOUR TIME OF TRANSLATION, BUDDY BOY. CALL UP PAT PRONTO.²⁷

What Sam Regan is reminding himself (Walt) is that he is undergoing translation with Fran (who will now be Perky Pat) and that if he hurries he might achieve his aim of having sex with her before the drug wears off. This mating with Fran, his neighbour's wife, will all take place in the identities and environment of Pat and Walt.

The narrator glosses Sam's reflections thus,

Her husband - or his wife or both of them or everyone in the entire hovel - could show up while he and Fran were in the state of translation. And their two bodies would be seated at proper distance one from the other; no wrong-doing could be observed, however prurient the observers were. Legally this had been ruled on; no cohabitation could be proved, and legal experts among the ruling UN authorities on Mars and other colonies had tried - and failed. While translated one could commit incest, murder anything, and it remained from a juridicial standpoint a mere fantasy, an impotent wish only.²⁸

Sam sees translation as an opportunity to do things either difficult or impossible in reality. His control over the situation slips, however, when he is caught in the act by the other hovellists, including Fran's husband, as they fuse with him.

Sam Regan's wheeze of leaving a hand written note for himself in the alternative, Can-D reality, is typical of how Dick might qualify the operation of the laws which apply in his 'dream' realities. Sam's identification with Walt is imperfect and therefore amenable to 'conscious' manipulation. It is as if he is allowed a certain amount of control over his dream. When Wittgenstein addresses the sceptic's argument concerning dreaming, he does so in the following terms,

The argument "I may be dreaming" is senseless for this reason: if I am dreaming, this remark is being dreamed as well - and indeed it is also being dreamed that these words have any meaning.²⁹

True, Wittgenstein is addressing the radical doubt of the Cartesian sceptic, but it is important to note that even at his most sceptical Descartes' 'evil genius' neither doubts his consciousness of his own mental states nor his knowledge of the language he uses to express his scepticism. Many of the sceptic's doubts, Wittgenstein suggests, are as senseless as doubting the meaning of one's own words. Thus the 'radical' doubt transpires to be selective after all. There seems to be something significant in the fact that we can doubt other people's words but not our own. But this too turns out to be misleading. Imagine, as Dick does, what it would be like if we always doubted other people's words. This is the situation which Leo Bulero finds himself in in Chew-Z land. Everything in this world appears to be a manifestation of Palmer Eldritch. Bulero's problem when confronted with these various embodiments of Palmer Eldritch, the little girl Monica, the Dr. Smile suitcase, the gluck, etc., is to sort out, not what is real from what is illusory, but what is true and what is false in the information he is being given about his situation. What he can act on. Even when he appears to have escaped back to the real life world, to his own office, Eldritch eventually manifests the gluck animal beneath his desk, just to show Bolero that he is still in Eldritch's realm. He therefore realises that he is not talking to Roni Fugate at all but to an hallucination.

Leo said, "Well, that's that. I'm sorry, Miss Fugate, but you might as well return to your office; there's no point in discussing that actions to take toward the imminent appearance of Chew-Z on the market because I'm not talking to anyone; I'm sitting here blabbing away to myself." He felt depressed. Eldritch had him and also the validity, or at least the seeming validity, of the Chew-Z experience had been demonstrated; he himself had confused it with the real. Only the malign bug created by Palmer Eldritch - deliberately - had given it away.³⁰

Even in the ensuing conversation with Roni Fugate, it is not clear whether he is talking to himself, his version of Roni plucked from his mind, or whether she is "possessed" by Eldritch. This question becomes the major question asked by the characters as the book progresses. They begin to realise that "Once you've taken Chew-Z, you're delivered over".³¹ Even after the main effect of the drug has worn off, you are subject to "phantasms" and "manifestations", particularly of Eldritch, until the drug finally disappears from the system. This makes matters very difficult for both character and reader. Because eventually nobody knows what is true and what is false. For example, when Barney Mayerson takes the drug he is fanatically possessed with a desire to be re-united with his ex-wife, Emily. During his first "trip" on Chew-Z, Barney tries to relive his life with Emily, just as it was, full of argument and recrimination. However, Eldritch convinces him that if he moved forward along the time line, to what I suppose we might call his present, he could change the course of their relationship. He tries, and even though Palmer Eldritch is there, manifested in the form of Richard Hnatt, he fails. The drug wears off, he awakes at Chicken Pox Prospects, his hovel on Mars. This is where it gets tricky. Mayerson is like the dreamer who awakes without "finishing" his dream, he wants to get back to sleep and see it through to the end. Freud called it wish fulfilment. That's what Barney Mayerson is doing. After being woken from this first Chew-Z experience he explains to Anne Hawthorne,

"It's an illusory world in which Eldritch holds the key positions as God; he gives you a chance to do what you can't really ever do - reconstruct the past as it ought to have been. But even for him it's hard. Takes time."³²

This is only one of many theories voiced by various characters, on the status of Eldritch and the Chew-Z experience, but for Mayerson it is enough to make him take another dose. When he tries to take Anne Hawthorne's bindle of the drug from her, she has the appearance of Eldritch, the stigmata. We begin to suspect that he hasn't woken at all. Upon chewing for a second time, Mayerson finds himself at Perky Pat Layouts, in Leo Bulero's office. It is however, two years in the future. Chew-Z has been banned. Eldritch is dead.

Phantasms of choosers are commonplace, Barney Mayerson appears to Leo Bulero as just such a "phantasm". Barney is confused. He complains,

"this isn't real; this is a drug-induced fantasy. Translation." "The Hell it isn't real." Leo glared at him. "What does that make me then? Listen." He pointed his finger angrily at Barney. "There's nothing unreal about me; you're the one who's a goddam phantasm, like you said, out of the past. I mean, you've got the situation completely backward. Your hear this?" He banged on the surface of his desk with all the strength in his hands. "The sound reality makes".³³

Here we have the classic confrontation between Moore and the sceptic. Moore banging the desk to prove that he, and everything around him is real. Unfortunately for us, the readers, this is two years in the future, and this future could be an illusion conjured up by Eldritch to convince Mayerson that it is all hopeless.

In the previous example, where he is talking to Roni Fugate, Leo Bulero has good reason to believe that everything around him is a hallucination. Although he can see and converse with Roni, he is fairly sure that she is not real. The illusion is so convincing that Palmer Eldritch has to manifest little animals to keep Bulero off balance. In the second example, Bulero is responding to the accusation of Barney Mayerson that they are both partaking in a drug induced fantasy. Once again, Bulero does not doubt his own consciousness or judgement, he doubts the existence of Mayerson, and Mayerson's (presumably also illusory) interpretation of events. Mayerson, on the other hand, knows that he himself is a phantasm. Unfortunately, the reader isn't in a position to confirm either hypothesis.

The tale as a whole reads as an extended meditation on epistemology. It is as if Moore, instead of refuting the sceptic's doubts, had confirmed them. Confirmed that there was no way of establishing that his memory was reliable; that external objects existed; that other people existed or that he had two hands. At certain points in the story, both Leo and Barney know that they are living in an illusory universe. What Wittgenstein says is that the sceptic would be equally unhappy about such a validation of his 'doubts' about reality, because if you know you are in a dream, you must be able to know when you are not. If you deny the possibility of knowing that you are in either of these states you cannot really say that you know anything. Doubt of this kind is nonsensical and stems from misunderstanding about the nature of knowledge, doubt and certainty.

If at various times, Dick's characters have reasonable grounds for doubting reality, at other times they can discern, only with extreme difficulty, the difference between their dream reality and ordinary reality. As the story progresses they are more likely to be mistaken, and eventually even the reader cannot tell which is which. At this stage we do not know what constitutes "reasonable grounds for doubt". All those grounds have been stripped away. Everything that Wittgenstein asserts as the basis of language as been uprooted. Clearly however, what apply as the ground rules in Dick's science fictional universe are not the same as what apply in our own. The axis of Moore type propositions has shifted. Those assumptions which it makes no sense to doubt or to confirm, which play a purely formal role in the language, are at the foundations of thought and understanding, are crucially different. When Dick took on the theatrical props of science fiction, as Lem terms them; "telepaths, cosmic wars, parallel worlds, and time travel", he inherited the equivalent of the background assumptions which Wittgenstein asserts are the basis of judging. To merely imagine these things to be so, would be to adopt the Moore-like position of confirming what are after all purely a series of truisms about the structure of language and thought. In this case it would be to confirm that in science fiction one ought to assume that travel in time, and materialising in other dimensions are part of the world that one doesn't normally question. Just as we do not normally question that the earth is round, or goes round the sun, or that men have been to the moon. What counts as an empirical proposition, and what functions as the basis for other empirical propositions changes with time.

Wittgenstein likens this feature of language to a river,

It might be imagined that some propositions, of the form of empirical propositions, were hardened and functioned as channels for such empirical propositions as were not hardened but fluid; and that this relation altered with time, in that fluid propositions hardened, and hard ones became fluid.

The mythology may change back into a state of flux, the river-bed of thoughts may shift. But I distinguish between the movement of the waters on the river-bed and the shift of the bed itself; though there is not a sharp division of one from the other.³⁴

Those formal characteristics of science fiction which, since the war might rightly be considered to be part of the mythology of science fiction, may by turns appear as empirical propositions, that is, as the subject of a given piece of science fiction. More commonly however, especially in science fiction which engages in various forms of parody and pastiche, the emphasis lies elsewhere. Clearly if one wishes to innovate upon these old forms and shift the bedrock, one must break the rules in a manner which is not trivial. Just as uttering "I know I have a hand" or "I know I am a human being" or "I know I have always been near the surface of the earth", become philosophically and epistemologically uninteresting in the context of a science fiction scenario (although I am sure that non-science fiction scenarios are just as plausible), it is equally difficult to make statements like "I know I am a robot", "I know I've never been to earth" or "I know I am in the wrong time" philosophically interesting in post-war science fiction. Intellectual and aesthetic criteria have changed, and to some extent hinge on the distinction between thinking that something is so, and thinking what it might be like if it was.

Thus one might imagine that one sees differently, or has an extra sense, like Ballard's character Powers in 'The Voices of Time'. Ballard describes how Powers sees time simply by invoking the old river metaphor.³⁵ The reader is left high and dry with a dusted off metaphor and poetic rhetoric. Apart from Powers' feeling of terminal lethargy there is little qualification of the nature of the experience. It is not a move in the science fiction language-game simply to state that time behaves, or is perceived differently from the way that we normally expect, and I'm not sure that it ever was. It is because the characters in Dick's world behave as if what happens in their illusory worlds or hallucinations materially affects their lives, and because these events affect us as readers, that we are drawn to reflect on these epistemological issues. Unlike the characters, the reader is not faced with a life or death decision, but the disruption of common-sense categories of life/death, dream/reality is so complete, that normal reading patterns are also disrupted and one is forced to reflect on the epistemological basis of the matter in question. In short, the reader has no idea what counts as an empirical statement.

The radical doubting of reality which characterizes the world of Palmer Eldritch, and the consequent disruption of reading, poses the question of how far it is possible or sensible to really doubt the existence of things. When we doubt the existence of everything, we leave ourselves open to the objection that because we do not concede that anything exists, if by some chance something actually did exist, we wouldn't be able to identify it as existing because existence is a quality we have never observed.

The doubt has merely undermined our use of the word. Wittgenstein remarks,

When one says "Perhaps this planet doesn't exist and the light phenomenon arises in some other way", then after all one needs an example of an object which does exist. This doesn't exist - as for example does.....³⁶

A doubt about existence can only work in what Wittgenstein calls a language-game. What we are concerned with here is the kind of language game that Dick is playing. By giving his characters grounds for doubt he simultaneously gives them grounds for belief. That we have difficulty discerning where reality ends and the dream begins is due to an ambiguity in the behaviour of the characters, reflecting an equally ambiguous view of reality. Wittgenstein maintains that there is a fundamental difference between asserting a doubt (especially of existence) in word and in deed. Asserting radical doubts in deed often leads to a person being classified as mad. Logically one might think that if the 'madman' can produce evidence to justify his doubt or strange belief, he, like Galileo and Einstein before him might be given some credence. That however is not how things operate. Doubts about knowledge do not admit of empirical evidence. If we doubt our senses we cannot base a theory of knowledge on any kind of observation about things in the world.

In his essay 'Philosophy as Grammar and the Reality of Universals', W. E. Kennick attempts to clarify in what sense Wittgenstein says that "philosophical statements are in one way or another grammatical".

He begins by defining what Wittgenstein means by an empirical proposition.

By an 'empirical proposition' Wittgenstein seems to mean a proposition (1) that is about phenomena, about the world, which means that it is not directly or indirectly about the use or meaning of words (single words, phrases, and sentences or 'propositions'), and (2) that is confirmable or disconfirmable by observation and experiment. A grammatical proposition on the other hand is one that is explicitly or implicitly verbal in import; it is directly or indirectly about the use or meaning of words.³⁷

By characterising philosophical statements as grammatical Wittgenstein is establishing that they cannot be affected by empirical observations.

By extension, because statements of epistemology cannot be verified by reference to things and events in the world, they ought to be immune from validation or invalidation due to radical developments such as relativity, quantum mechanics, or even Palmer Eldritch. Clearly however, the altered physics of Dick's novels affects the reader's ability to make sense of the narrative. This Dickian physics is a kind of assemblage from a century of science fiction.

As Lem says,

Dick has as a rule taken over a rubble of building materials from the run-of-the-mill American professionals of SF, frequently adding a true gleam of originality to already worn-out concepts, and what is surely more important, erecting with such materials constructions truly his own. The world gone mad with a spasmodic flow of time and a network of causes and effects which wriggles as if nauseated, the world of frenzied physics, is unquestionably his invention, being an inversion of our familiar standard according to which only we, but never our environment, may fall victim to psychosis.³⁸

Lem goes on to point out that "Componential analysis, designed to separate what is "factual" from what forms the "message"" is impracticable with Dick's work.

The reader of such work does not know whether what he is shown is supposed to exist like a stone or a chair, or whether it is supposed also to signify something beyond itself.³⁹

Further, he suggests that Dick is so "caught up in his vision" that to ask him to separate the literal from the metaphorical would be like asking a man to explain the "real meaning" of his own dreams. This is not to say that there is no element of design in Dick's work, several consistent themes may be discerned in his stories. One such theme which Lem notes is that of the worlds disintegrating into the chaos through no discernible agency, and for no particular reason. He sees a major break with science fiction tradition in the fact that the causes of the cataclysm are not identified, and solutions to the problem are not found.

The cataclysm, as we have seen, usually takes the form of an epistemological crisis, and as I have shown, epistemological problems have no solutions, because they are not problems in any non-philosophical sense. They are as Wittgenstein says, formal questions, and relate to our use of language. What I have suggested is that the inability of Dick's characters and readers to make fundamental judgements about the nature of Dickian reality, indicates that the Dickian language-game attacks its own foundations.

His approach is an interesting test of Wittgenstein's assertion that the foundations of judgement are the foundations of language⁴⁰; that certain events, such as finding that someone I had known for years was not really that person at all⁴¹, put one in a position where we cannot go on with the old language-game. We are not thrown from the saddle because the facts buck, but because we can no longer guarantee the regularity of events any more.⁴²

He writes:

In that case it would seem as if the language-game must "show" the facts that make it possible. (But that's not how it is). Then can one say that only a certain regularity in occurrences makes induction possible? The 'possible' would of course have to be 'logically possible'.

Am I to say: even if an irregularity in natural events did suddenly occur, that would have to throw me out of the saddle. I might make inferences then just as before, but whether one would call that "induction" is another question.⁴³

Wittgenstein makes these remarks in the context of demonstrating that not only are there situations where doubt makes no sense (such as those posed by the Cartesian sceptic), but situations where it makes no sense to say that we know something (as Moore continually does).

That is to say, the questions that we raise and our doubts depend on the fact that some propositions are exempt from doubt, and are as it were like hinges on which those turn.

That is to say, it belongs to the logic of our scientific investigations that certain things are not in deed doubted.⁴⁴

Dick specialises in removing the hinges, the beliefs and assumptions which Wittgenstein says form the basis of knowledge, judgement and language.

He precipitates in his characters crises caused by having all their fundamental beliefs and values threatened or denied. A little like Pris in Androids cutting off, one by one, the legs of a spider, Dick cuts off one by one his characters' beliefs, his ties with reality. In Eye in the Sky we saw characters trying to survive in a world dictated by someone else's beliefs. In The Simulacra, people's belief in Nicole, the perfect puppet politician is destroyed. Continually characters discover they are living in false realities, continually their faith in their work, their employer, their wife and their God is crushed. Ubik pushes this principle to its extreme.

Ubik: All-Purpose Reality Support on Easy Terms

Ubik is the story of a mishap which befalls the employees of Runciter Associates, an event which you could say changes their lives. Runciter Associates is an "anti-psi prudence organisation", an agency which supplies inertials to counteract the talents of "teeps, parakineticists, precogs, animators and resurrectors".

Inertials are people with "anti-talents", they can nullify the field of a telepath, a precog, etc. They are often the child of parents who have a talent, and have developed the ability to protect themselves from having their mind read, or whatever, by generating a nullifying effect.

Joe Chip, chief tester for Runciter, explains how the anti-precog functions,

The precog sees a variety of futures, laid out side by side like the cells in a beehive, For him one has greater luminosity, and this he picks. Once he has picked it the anti-precog can do nothing; the anti-precog has to be present when the precog is in the process of deciding, not after. The anti-precog makes all futures seem equally real to the precog; he aborts his talent to choose at all. A precog is instantly aware when an anti-precog is nearby because his entire relation to the future is altered.⁴⁵

Here Dick has taken a classic piece of science fictional mythology, precognition and alternate futures, and by proposing the category of 'inertials' has trivially altered a formal convention. By inventing Pat Conley he had totally subverted that convention.

Pat Conley, Chip's newly discovered inertial, has an anti-precog ability which functions in an entirely different way from other inertials. She can retrospectively alter the course of time. She cannot only render the precog's choice wrong, but in doing so changes the path of time, changes the present. Thus not only does the precog not know that his prediction has been invalidated but everyone whom the change affects remains to a large extent unaware that they have been shifted onto a new time track. To the extent that we are never quite sure how Pat Conley is altering the course of things, her capacity poses serious narrative problems in a novel that is by no means straightforward without her. The plot, such as it is, runs thus. Runciter and a group of his inertials are lured to the moon by Ray Hollis, the leading employer of psi-talents in the Sol system.

A self-destruct humanoid bomb in the form of Stanton Mick, "reclusive, interplanetarily known speculator and financier" explodes and apparently kills Runciter. Hollis supplies psi talents for industrial espionage, Runciter runs an agency which, a little like pest exterminators, contracts to rid firms or individuals of these psi-moles. Runciter is killed, we assume, in an escalation of this industrial war. Luckily, however, in the year 1992, if you've got the money, you need not die. Remember in Dick's worlds you can buy anything, even immortality. The dead can be frozen in cold-pac, in a kind of suspended life, called half-life. Communication with the half-life is possible by "revving them up" occasionally and talking to them through a microphone. Each time the relative revives a loved one the duration of the half-life is reduced, till after several years, it dims altogether. Runciter is taken to the same Moratorium where his wife Ella, is in cold-pac, but although the technicians there detect cerebral activity they fail to make contact with him.

To make matters worse, Chip and his fellow employees find that since the bombing some kind of premature aging syndrome has come into effect. Cigarettes crumble to pieces, newspapers, money and telephone directories are found to be out of date. In direct parallel to these anomalies, messages from Runciter on matchfolders, etc., and coins with his head on, begin to appear. Wendy Wright and Al Hammond succumb to the premature aging and crumble away to dry bone.

Theories about their predicament begin to proliferate. Are Chip's inertials participating in an illusion generated by the explosion on Luna? How far back in time are forms going to regress? Chip wonders, in a classic practical Dickian response to such problems, how long, with devolving forms of transport, it is going to take him to get to Des Moines.

As methods of transportation devolve, he thought, From rocket propulsion to jet, from jet to piston driven aircraft, then surface travel as the coal-fed steam train, horse drawn car - but it couldn't regress that far, he said to himself.⁴⁶

These atavisms it transpires are the natural way of things for the half-lifer. It would appear that the explosion killed all except Runciter, and the various manifestations of Runciter are caused by his attempts to contact them as they lay frozen in cold-pac. The world they are experiencing is a creation of the malevolent half-lifer Jory, who preys, vampire-like on the energies of other half-lifers. Maintaining the illusion of the vast technological environment of 1992, presents such a strain on Jory, that the natural atavism of the half-life world begins to regress his construction. Essentially he is playing a game, toying with them, but the strain put upon him by Chip and the other inertials' activities requires him to eat one or two of them in order to keep up his strength.

Dick's language in Ubik, despite the drastic decay of reality which he depicts, remains surprisingly clear. Given that he has removed just about every basic assumption which a human being has, notably that one is alive, that one is conscious, and that one somehow has a control over one's actions, Dick's characters manage to carry on a in a remarkably coherent fashion. When faced with the complete collapse of reality his characters elicit a practical and concrete response. One of the difficulties in reading Ubik is that whenever characters get together to discuss the epistemological basis of their situation, and the reader begins to think that he understands, the characters invariably turn out to be deceiving each other, themselves, or are just plain wrong. Joe Chip's theories about what is happening to himself and his colleagues are constantly undermined by some new discovery or event, thus he spends his whole time wrestling with the practicalities of the altered reality. Even before Chip was precipitated into Jory's mad world of frenzied physics, he appears to have spent a good deal of his time wrestling with the practicalities of life. As is common in many of Dick's worlds, in Ubik we find that 'commodities' such as toasters, refrigerators, taxi-cabs and even doors, appear to have a life of their own. Always they have to be coaxed and cajoled into rendering service, they even answer back and offer their philosophy of life. Joe Chip's life appears to be entirely ruled by officious domestic appliances. His attempt to get the building's clean-up robots to come in and make his apartment look presentable for G. G. Ashwood's attractive new find, only results in a rebuke from the buildings maintenance circuit.

Our department - in fact the whole conapt building - is now programmed against an extension of your services and/or credit to such pathetic anomalies as yourself, sir. Regarding you, everything must hereafter be handled on a basic-cash subfloor. In fact, you'll probably be on a basic-cash subfloor for the rest of your life. In fact - He hung up. And abandoned the hope of enticing and/or threatening the clean-up robots into entering his muddled apartment.⁴⁷

Chip's financial situation is so bad that he can't even get out of his own apartment door. As he tries to exit, the door demands 5 cents. Chip claims that the payment is a gratuity and not mandatory, the door proves otherwise.

"You discover I'm right," the door said. It sounded smug. From the drawer beside the sink, Joe Chip got a stainless steel knife; with it he began systematically to unscrew the bolt assembly of his apt's money-gulping door. "I'll sue you," the door said as the first screw fell out.⁴⁸

In real life however, we don't talk to doors or have arguments with toasters, do we? What Dick appears to be proposing is a kind of Laingian reversal of the notion of madness. It's the world that has gone crazy not the patient. Joe Chip's reactions to a world gone crazy are very concrete; he unscrews the door-lock and finds himself some transport, he takes the stairs instead of the lift, etc. In our world the way that Chip thinks and acts would be taken as the symptoms of paranoid schizophrenia. However, the crucial difference between Dick's world and normal reality is that in Dick's world, the schizophrenic's view of the universe turns out to be correct.

Having removed so thoroughly, independent grounds for judgement it is hardly surprising that Stanislaw Lem finds it necessary to say that Dick provides no answers. There are no answers to the kinds of questions raised in his novels. As soon as one begins to ask questions about the nature of reality; is it real, false, an illusion, a dream, etc?; as soon as the action is placed within this framework of radical doubt, the reader is cast adrift, unable to tell whether a lifecraft will float until one of Dick's characters tries it out. The altered physics of the Dickian world suspends the reader's ability to make common sense judgements about situations. Its characters however must continue to act and make practical decisions despite the collapse of their reality. Questions about the nature of such realities have no answer unless, as with Time Out of Joint it transpires that the whole false reality was an illusion conjured up by the government. Dick's stories rarely resolve themselves as clearly as Time Out of Joint. Only the laconic style of its cloak-and dagger make this ludicrous tale readable. Further it is an untypical treatment of typical Dickian themes. Dick's central theme of paranoia is here a kind of domesticated and entirely reasonable suspicion of government conspiracy. In a way, I am saying that this novel is untypical of Dick because it avoids the metaphysics. The disintegrations of reality which characterize both Ragle and Vic's perception of Old Town are not explained and therefore quietly forgotten in the denouement.

Another feature that makes Time different from other Dick novels is that the solution to the manifest problem is also the solution to each of the various character's problems.

When what appears to be a problem about individual perceptions of reality turns out to have a rational explanation, and the "appeal to metaphysics", so important in novels from The Eye in the Sky onwards, becomes a dead question, we are left with a story about mundane emotional confusions set against a post-holocaust military backdrop. The family relationships, emotional ties, affairs and feelings of loyalty which are so central to Dick's theme, are in Time almost superfluous to the plot. Ragle's affair with Junie Black is in this respect a good indication of how Time is a botched attempt at building a metaphor about modern day perception of reality. In subsequent novels, Dick will make his metaphysical point through such relationships. Dick's characters, when they entertain us with their comedy of errors and misunderstandings are defining what Aldiss calls 'Dick's Maledictory Web'.⁴⁹

This web binds together human relationships and the whole network of civilisation which engulfs his characters. When they find that their relation with the world is built of lies, deceptions and various forms of emotional and intellectual cheating, the answer is rarely to escape that world, for what they eventually discover is that the whole edifice, defining every perception of reality, is bound together by illusion.

Lem suggests a comparison between how Dick treats these illusory realities and how various 'new wave' writers, such as Ballard approach the technological transformation of reality.

Lem continues to document his love/hate relationship with Dick's work calling the author "perfidious",

in that he does not give unambiguous answers to the questions provoked by reading him, in that he strikes no balance and explains nothing "scientifically", but rather just confounds things, not only in the plot itself but with respect to a superordinated category: the literary convention within which the story unfolds.⁵⁰

Whereas one might expect either a utopian or dystopian prognosis, Dick provides neither. He does not suggest a return to nature, the evolution of homo superior, or, as Ballard, a bland submission to the inevitable. Lem sees such an "atomic credo" of inevitable catastrophe characteristic of new wave writers as the shirking of creative responsibilities.

Such expedients are foreign to Dick. For him the development of civilisation continues, but as it were crushed by itself, becoming monstrous at the height of its achievement -

Alarm at the impetus of civilisation finds expression nowadays in the slogans of "return to nature" after smashing and discarding everything "artificial", i.e. science and technology. These pipe dreams turn up also in SF. Happily they are absent in Dick. The action of his novels takes place in a time where there can no longer be any talk of a return to nature or of turning away from the "artificial" since the fusion of the "natural" with the "artificial" has long since become an accomplished fact.⁵¹

What is interesting about Dick's various worlds is how the supposedly "natural" and the supposedly "artificial" are fused: how the false is confused with the genuine, the spiritual with the material, the metaphoric with the literal.

Although the questions raised in Dick's work are largely epistemological, that is they address questions concerning the foundations of knowledge, the answers one gets invariably concern the basis for actions. This is an important aspect of Dick's scenarios. They resolve themselves through the characters taking positive action in situations which they do not fully understand. Because of Pat Conley, for example, Joe Chip is unsure which time track he is on even before the Stanton Mick explosion. He finds himself window shopping for rare coins for a collection he is not sure he has, and is not even sure whether Pat Conley is still his wife, but the significance of the two underlined crosses remains the same. Just as with Sam Regan's message to his hallucinating wife, Joe Chip has an apparently independent source of appeal in verifying the status of his reality, a source which paradoxically was generated by himself. Of course there is the possibility that the crosses mean other than "this girl is dangerous", but they seem to Chip to be something that has not been changed, and serve therefore as a basis for action.

Meagre as such indications are, Dick's heroes stoically proceed in the full knowledge of their own helplessness. Even central God-like figures such as Palmer Eldritch, Hawthorne Abendson and Jones, are deluded about the realities which they to a certain extent stage-manage. The reader is drawn into this "comedy of mistakes", as Aldiss terms it, by an ever-changing series of narrative perspectives, reflecting the contradictory or simply mistaken views of self-interested individuals.

Further it is unusual in Dick's later works for the author to clarify the situation by favouring a particular view. The appearance of the Joe Chip money at the end of Ubik, Laws being bitten by the bug at the end of The Eye in the Sky, Leo Bulero retaining the stigmata at the end of The Three Stigmata of Palmer Eldritch, are prime examples of Dick refusing to 'submit to reality' by providing a narrative solution. The bewildering series of clues with which the reader is left fail to indicate which parallel world, which time-track or which illusion is the 'real' one. Peter Fitting, confessing a "fascination" with Dick's work, attempts to interpret this formal anarchy as "a critique of the ideological presuppositions of the SF genre and of the traditional novel in general".⁵² He goes on to describe the "discovery scenes", where a character realizes that his reality is somehow an illusion, as dramatisations of,

the epistemological critique of the dominant positivist view of empirical reality as an objective "world of facts" which can be apprehended directly by the knowing subject.⁵³

I concur that the notion of 'reality' as a socially constructed ideology is central to Dick's work, but question the coherence with which he forwards that view. Faced with superficial characterisation and confusing plotlines, the temptation is to put it all down to sloppy writing rather than

a model of a more subversive form of writing which undermines rather than confirms the repressive system in which it has been produced.⁵⁴

Neither of these views, however, take account of Dick's place in the tradition of science fiction nor the lucidity with which he is capable of expressing complex notions. There is nothing sloppy about the writing in 'The Golden Man' or 'The Electric Ant' for example, yet their elegance belies their beginnings in pulp science fiction stories about mutants and robots. I noted in the last chapter the extent to which the characteristic obsessions of science fiction are reflected in narrative techniques and conventions. Playing around with time affects narrative flow, and addressing the nature of identity suspends certain criteria about how characters behave. To what extent can doors, toasters and taxi-cabs, for example, be considered characters? These matters seem quite trivial when taken in a literary context, but assume the status of philosophical meditations when moved into the domain of human behaviour. A narrative conservatism leads Harness to use time-travel as a device, rather than as an object of study, and leads Bester's reflections on mind-reading and the will into trite romantic platitudes about the power of the human imagination. There seems here a distinction to be made between imagining something to be so, time running backwards, finding oneself to be a robot, reading somebody else's mind, etc., and imagining what it would be like if it was. Thus science fiction tends to concentrate on how one might travel in time, in terms of machines and causes, rather than what it might actually be like to experience it, and what the psychological and philosophical implications might be. Certain issues are glossed over like, how we would know we had travelled in time, how does one find one's footing in this altered reality?

One of Wittgenstein's students once remarked "Just imagine, before Galileo people thought the sun went round the earth!", to which Wittgenstein replied "Just imagine what it would look like if it did." Thus Wittgenstein's student has tended to think of people before Galileo as in some way deluded, as subject to some species of madness. What we call physics and what we call metaphysics are thus confused, one applies physical criteria to a metaphysical problem, and vice versa.

When Dick takes on the gaudy admixture of physics, metaphysics, social commentary and oddball humour which typifies science fiction, one is aware that Dick is taking on these issues so thoroughly that he leaves himself without an escape route. Finding himself in the nightmare world of physics, metaphysics and religion, and drawing the reader after him, he neglects to indicate a way out. Even Lewis Carroll allowed Alice to find her way back to reality.

George Pitcher in his essay 'Wittgenstein, Nonsense, and Lewis Carroll' sees a close parallel between Carroll and Wittgenstein's treatment of philosophical nonsense.

Pitcher provides examples from Alice's Adventures in Wonderland, Through the Looking Glass, and the Sylvie and Bruno books, which demonstrate an affinity in the views of the writers with respect to nonsense. Further, each example is chosen to illustrate key aspects of Wittgenstein's approach. Alice's conversation with Humpty Dumpty, becomes in Pitcher's view an illustration of how nonsensical it is to suggest that meaning words is one thing (a kind of mental act) and saying words another (a performance). Pitcher concludes that although Wittgenstein's arguments are supported by Carroll's dramatisations, their attitudes to the problem were radically different.

It tortured Wittgenstein and delighted Carroll. Carroll turned his back on reality and led us happily into his (wonderful) world of myth and fantasy. Wittgenstein, being a philosopher, exerted all his efforts to drag us back to reality from the (horrible) world of myth and fantasy. But the two men cover much the same ground: we may even look on Wittgenstein as conceptualising and applying to philosophy many of the points which Carroll had simply intuited.⁵⁵

Pitcher is careful not to attribute a direct influence on Wittgenstein through Carroll's writing. I similarly do not impute a direct influence on the work of Dick by Wittgenstein, and am suspicious as to what extent the sophisticated thought which characterizes Wittgenstein's philosophical investigations can be intuited.

It is important to see that the epistemological problems which Dick presents invariably spring from raising the stakes on a classic science fiction theme. In Do Androids Dream of Electric Sheep? Dick presents problems of artificial intelligence and the status of robots, by asking questions about the ethics of "retiring" androids so life-like that it is almost impossible to distinguish them from human beings.

Does Chomsky Dream of Electric Ants?

The android had been developed after war had made the earth so radioactive that a colonisation program had been instigated. From their beginnings as synthetic guerillas, and giveaway incentives for reluctant emigres, androids developed to such a degree that eventually a test had to be devised to distinguish runaway androids from human beings. The Voigt-Kampff Empathy Test had emerged as the state of the art in this field. Rick Deckard reflects

An android, no matter how gifted as to pure intellectual capacity, could make no sense out of the fusion which took place routinely among the followers of Mercerism - an experience which he, and virtually everyone else, including subnormal chickenheads, managed with no difficulty.⁵⁶

Dick uses the notion of empathy and the Mercerite religion to establish Deckard's criteria for designating androids as inferior, as mere machines. Whereas Deckard and his wife, we find, programme themselves every morning with their Penfield Mood Organ.

At one point Deckard begins to feel that he has more empathy for androids than he has for some human beings.

Most androids I've known have more vitality and desire to live than my wife.⁵⁷

His meeting with Luba Luft strengthens this view.

He had never thought of it before, had never felt any empathy on his own part toward the androids he killed. Always he had assumed that throughout his psyche he experienced the android as a clever machine - as in his conscious view. And yet, in contrast to Phil Resch, a difference had manifested itself. And he felt instinctively that he was right. Empathy toward an artificial construct? he asked himself. Something that only pretends to be alive? But Luba Luft had seemed genuinely alive; it had not worn the aspect of a simulation.⁵⁸

Deckard here, for the first time begins to qualify the notion of empathy. It becomes more than a convenient term, it denotes distinctions. But not the distinction between android and human, or predator and herbivore. Luba had been an opera singer, Deckard reflects that the beauty of her voice, the fact that she was attractive, and the fact that she had sung The Magic Flute, one of his favorite operas, might contribute toward his feeling for the android. Conversely, Resch's obvious lack of feeling, his failure to understand why he reckoned he had bought Luba the book of Munch prints, confirm in Deckard that he would happily have killed Resch instead and felt nothing. He reflects

So much for the distinction between authentic living humans and humanoid constructs. In that elevator at the museum, he said to himself, I rode down with two creatures, one human, the other android... and my feelings were the reverse of those intended. Of those I'm accustomed to feel - I'm required to feel.⁵⁹

This is a familiar theme for Dick, In an essay entitled 'Man, Android and Machine', he defines androids as "things trying to pass themselves off as humans."

I mean a thing somehow generated to deceive us in a cruel way, to cause us to think it to be one of ourselves. Made in a laboratory - that aspect is not meaningful to me; the entire universe is one vast laboratory, and out of it come sly and cruel entities which smile as they reach out to shake hands. But their handshake is the grip of death, and their smile has the coldness of the grave.

These creatures are among us, although morphologically they do not differ from us, we must not posit a difference of essence, but a difference of behaviour.⁶⁰

He goes on to list instances of characters in his books, who like Rachel Rosen lack something, or who are "schizoid" and lack proper feeling, and therefore qualify as things rather than people.

A human being without the proper empathy or feeling is the same as an android built so as to lack it, either by design or by mistake.⁶¹

Not only is it important to realize that human beings can lack something that makes them human, but it must also be remembered that it is possible to be mistaken about the humanity of androids. This is shown by Deckard's brief affair with Rachel Rosen. Rachel Rosen is never what she appears to be. From the very beginning we are misled. Is she human? Is she android? Is she a good android, a bad android or someone else's puppet? Dick effectively raises the stakes on the question of robots and androids, by posing the question as a problem about differentiating between the false and the genuine, the illusory and the real.

This is shown by Descartes himself. His a priori assumption that one cannot doubt one's own consciousness and what one is thinking, entails the concomitant assumption that it makes no sense to doubt one's knowledge of the language and the meaning of the words one uses. Try doubting the meaning of the words one is using. Then try and doubt without the words. The kind of radical doubt which characterizes the queries of the Cartesian sceptic, questions about the foundations of knowledge, characteristically look for an answer which is beyond language. Thus we find the approach which characterizes Chomsky's attack on the problem of "interpreting the world", put forward in Problems of Knowledge and Freedom.

Chomsky attempts to show that a series of structure-dependent operations on various sentences indicate that there are corresponding underlying structures, common to all human beings, which pre-dispose us to structure our perceptions of the world in a particular way. He writes,

Thus in an important sense the rules are 'structure dependant and only structure dependant,' Technically, they are rules that apply to abstract labelled bracketing of sentences (abstract, in that it is not physically indicated), not to systems of grammatical or semantic relations. Again, there is no a priori necessity for this to be true. These characteristics, if true, are empirical facts. It is reasonable to suppose that they are a priori for the organism, in that they define for him, what counts as a human language, and determine the general character of his acquired knowledge of language.⁶⁴

Chomsky's approach is novel in that he instances the often illogical and meaning-independent quality of many of the rules which he identifies, as an indication that they are the manifestation of something deep-seated rather than culturally imposed.

He goes on to retail the notion that in breaking these rules, literature exploits what can and cannot be said grammatically.

Rebecca West, in criticism of the view that art reflects nature, wrote that 'A copy of the universe is not what is required of art; one of the damned thing is ample.' The statement violates the rule of grammar that requires a plural noun in such phrases as 'one of the books is here' or 'one of the damned things is enough'. But the statement is nevertheless exactly to the point. We can often exploit the expressive resources of language most fully by departing from its principles.⁶⁵

These principles are, he imagines, laid down in our biological make-up.

Perhaps this means that the innate schematism that the child brings to bear in language learning is unique to language. If so, the neurologist faces the problem of discovering the mechanisms that determine this schematism, and the biologist the problem of explaining how these developed in the course of human evolution.⁶⁶

By imagining that such a 'schematism' might "impose absolute limits on what can be known," and that the biological mechanism for our pre-disposition might be discovered, Chomsky imagines that he sees an end to his task. The end of his quest to find the limits of knowledge, like many epistemologists before him, he sees in some kind of absolute or universal, in this case a linguistic universal based on biological evidence. The man becomes a mechanism.

The hypothesis that our perceptions of the world are in some way programmed is the subject of Dick's 'The Electric Ant'. Instead of waking up, as Gregor Samsa did, transformed into a giant beetle, Garson Poole wakes up and is informed,

You're a successful man, Mr. Poole. But, Mr. Poole, you're not a man. You're an electric ant.⁶⁷

An electric ant, it transpires, is a humanoid organic robot, programmed with the delusion that he is human. The realisation of his mechanical nature sparks off the usual speculations about the nature of free will.

Shall I go to the office? he asked himself. If so, why? If not, why? Choose one. Christ, he thought, it undermines you, knowing this. I'm a freak, he realised. An inanimate object mimicking an animate one. But he felt alive. Yet.... he felt differently, now. About himself. Hence about everyone, especially Danceman and Sarah, everyone at Tri-Plan.⁶⁸

Always with Dick it is important that the discovery of illusion, is focused through the character's attitude to his work, his employer, and his mistress (usually in that order). Garson Poole immediately sets about a series of experiments designed to discover how he knows things. Like Chomsky, he is interested in the mechanism whereby he perceives reality. Unlike Chomsky he finds it in a "punched tape roll" above his heart mechanism. This is his "reality-supply construct". The computer explains

"All sense stimuli received by your central neurological system emanate from that unit and tampering with it would be risky if not terminal." It added, "You appear to have no programming circuit."⁶⁹

The idea that he is being controlled by a "reality tape" is so repugnant to Poole that the first question he asks is,

Do I want to interfere with the reality tape? And if so, why? Because, he thought, if I control that, I control reality. At least so far as I'm concerned. My subjective reality..but that's all there is. Objective reality is a synthetic construct, dealing with a hypothetical universalization of a multitude of subjective realities.⁷⁰

The resemblance between this last, and Chomsky's justification for his quest for "principles of mental organisation" is remarkable.

The principles of mind provide the scope as well as the limits of human creativity. Without such principles, scientific understanding and creative acts would not be possible. If all hypothesis are initially on a par, then no scientific understanding can possibly be achieved, since there will be no way to select among the vast array of theories compatible with our limited evidence and, by hypothesis, equally accessible to the mind.⁷¹

This view that the mind is a kind of valve which controls the influx of an anarchic reality, provides a picture which leads us to doubt the veracity of our senses and leads to questions about the real nature of reality. The picture is misleading because it pretends that it might be possible to apprehend reality directly, i.e. without these censoring devices. This is exactly what Garson Poole attempts to do. By punching holes in his reality tape, by inserting blank bits, and finally by cutting it all together, he makes various aspects of his reality appear and disappear until he experiences "absolute and ultimate reality", and "dies". This experience of 'ultimate' reality, this unmediated sensation of touch, smell, taste, sound and vision, is presented in the usual impressionistic, surreal manner which is customary when presenting altered perceptions. This juxtaposition of various synaesthetic sensations, and disparate ideas and perceptions, appears on the face of it to support the picture that there is a more immediate reality beyond that structured by knowledge, language and human behaviour, a reality which we can vicariously gain access to through hallucinogenic drugs, and through the 'creative' breaking of semantic rules.

Dick however, snatches this comfortable picture away in his postscript. The narrative viewpoint shifts to Sarah Benton watching Poole 'die'.

It thought I was a stimulus-factor on its reality tape, she said to herself. So it thought I would die when it "dies". How strange, she thought. Why did it imagine that? It had never been plugged into the real world; it had "lived" in an electronic world of its own. How bizarre.⁷²

Sarah and her world then begin to fade away, she and the world of matter disintegrate and the story ends.

In my last chapter, I noted how various errors of thinking were caused by presenting metaphorical statements as empirical statements. The apparent 'depth' of such propositions stems from a "disquietude" with its roots in the form of language. Wittgenstein remarks,

The problems arising through our misinterpretation of our forms of language have the character of depth. They are deep disquietudes; their roots are as deep in us as the forms of our language and their significance is as great as the importance of our language. - Let us ask ourselves: why do we feel a grammatical joke to be deep? (And that is what the depth of philosophy is.)⁷³

A metaphysical question is characterised by the expression of "an unclarity about the grammar of a word in the form of a scientific question". Thus the question "What is reality?" has the same form as "What is a cloud?", whereas one is metaphysical (Wittgenstein would say grammatical), and the other is empirical. When Poole asks the question "What is reality?" he treats the question in a scientific manner.

For Sarah Benton the problem is something private to Poole. It is an accepted assumption that one's sensations are private, and can directly affect only oneself. She does not imagine that messing around with his "reality-tape" can possibly affect herself. Poole, like Descartes before him believes he has found something which will guarantee knowledge of reality. Poole has his tape, Descartes his "Cogito ergo sum". What characterizes both these is that a subjective criterion is posited as the basis of an objective enterprise. In Poole's case controlling the world, in Descartes, science, ethics, etc. This however is the central dilemma of epistemology. Its first principles must be independent of observation and the evidence of the senses, yet stand fast. "I think therefore I am" is not an empirical statement because it cannot be verified by any kind of observation. It relies, in Descartes' case, on his inability to doubt his own consciousness, and, when presented as the basis of knowledge, it relies on the agreement of other 'I's that the statement holds fast. This is why Wittgenstein terms the propositions of philosophy and epistemology "grammatical". The consideration of anything which we term 'private', our sensations, thoughts or feelings, begin and end in language. When we try to get at the essence of such things language, words, is what we end up with.

The proposition "Sensations are private" is comparable to: "One plays patience by oneself".⁴

What does it mean when we say: "I can't imagine the opposite of this" or "what would it be like if it were otherwise?" - For example, when someone has said my images are private, or that only I myself can know that I am feeling pain, and similar things.

Having been thrust into the noumenon, Prentiss finds that all is black.

His senses were useless.

He even doubted he had any senses.

So far as he could tell he was nothing but an intelligence, floating in space. But he couldn't even be sure of that. Intelligence - space - they weren't necessarily the same now as before.

All that he knew for sure was that he doubted. He doubted everything except for the fact of doubting.

Shades of Descartes!

To doubt is to think!

Ergo sum!⁷⁶

Harness's story resolves itself into a re-run of the Adam and Eve story, chiefly because he would like to regard the quest of science as principally romantic. A celebration of the supremacy of the human mind and of the imagination. The idea of freeing the mind and the imagination from the shackles of reality, and ultimately of controlling reality, is science and science fiction's greatest myth. By demonstrating that such an idea springs from treating a grammatical statement "I think therefore I am", as if it were an empirical one, Wittgenstein effectively short-circuits the task of epistemology.

Whether you call the propositions of philosophy, analytic, structure-dependent, grammatical or linguistic, it is clear that they cannot be proved or disproved by observation or the evidence of our senses.

Thus,

If I now say "I know that the water in the kettle on the gas-flame will not freeze but boil", I seem to be as justified in this "I know" as I am in any. 'If I know anything I know this'. - Or do I know with still greater certainty that the person opposite me is my old friend so-and-so? And how does this compare with the proposition that I am seeing with two eyes and shall see them if I look in the glass? - I don't know confidently what I am to answer here. - But still there is a difference between the cases. If the water over the gas freezes, of course I shall be as astonished as can be, but I shall assume some factor I don't know of, and perhaps leave the matter to physicists to judge. But what would make me doubt whether this person here is N.N., whom I have known for years? Here a doubt would seem to drag everything with it and plunge it into chaos.⁷⁸

In Now Wait for Last Year, The Simulcra, Do Androids Dream of Electric Sheep?, in Palmer Eldritch and Ubik, people have reason to doubt things on all these counts. When physical things don't behave as they should, as in the regressive behaviour of objects in Ubik. One's hypothesis must change. When a person turns out to be a robot, a fraud or is in some way proven to be other than previously thought, a system of beliefs may crumble. In Dick's novels, when such beliefs are undermined they drag everything else into chaos. These scenes of the disintegration of reality are invariably precipitated by the revelation that the character's employer, mistress or god is a fraud. In Androids, J. R. Isidore's reaction to finding that Mercerism is a swindle, is typical.

The spider is gone; Mercer is gone; he saw the dust and the ruin of the apartment as it lay spreading everywhere - he heard the kipple coming, the final disorder of all forms, the absence which would win out. It grew around him as he stood holding the empty ceramic cup; the cupboards of the kitchen creaked and split and he felt the floor beneath his feet give.⁷⁹

In this way, Dick invites us to make a distinction between what we know and what we believe. Because his characters are invariably mistaken in what they know and believe, and because Dick neither favours a particular character's view nor privileges a particular parallel world, or 'illusory' reality, the reader is asked to apply criteria and make distinctions which are usually given. He happily admits that his characters are often fakes and frauds, deceiving themselves and each other and situated in an illusory reality. Thus in The Man in the High Castle, Hawthorne Abensden's book The Grasshopper Lies Heavy is a fictitious tale of how the allies won the second world war, set within the MHC world where the axis powers won. Reality poses as fiction. Dick's steadfast refusal to define what is artificial and what is real is pivotal to an understanding of his work. Anything in his worlds is likely to be artificial, ersatz, a simulcrum or a counterfeit. In MHC everyone is pretending to be something which they are not. Further Frank Frink is involved in the production of replicas of antiques, indistinguishable from originals, complete with signs of ageing, discolouration, etc. Mr. Childan, the fawning sychophantic dealer is entirely fooled by Frink's merchandise when, disguised as a Japanese admiral's gentleman, Frink teases Childan,

"Is it possible, sir, that you, the owner, dealer in such items, cannot distinguish the forgeries from the real?"⁸⁰

Frink's deliberation on the status of such imitations suggest that even in a philosophical context, what distinguishes the real from the false is determined by market forces.

It had never occurred to (the Japanese) to ask themselves if the so-called historic art objects for sale in West Coast shops were genuine. Perhaps someday they would... and then the bubble would burst, the market would collapse even for the authentic pieces. A Gresham's Law: the fakes would undermine the value of the real. And that no doubt was the motive for the failure to investigate; after all, everyone was happy.⁸¹

In the scene involving Frink's ex-employer Wyndham-Matson and his mistress Rita, Dick emphasises the spuriousness of designating an item genuine or real, and begins to suggest the necessity of the illusion. Following Frink's exposure of some of the merchandise which Childan has acquired from Wyndham-Matson as fakes, one of his middlemen Ray Calvin returns a shipment as sub-standard.

Wyndham-Matson gets into an argument with his mistress about the merits of paying Frink to keep his mouth shut and about the fact that they are faking antiques. He declares that,

"This whole damn historicity business is nonsense. Those Japs are bats. I'll prove it." Getting up he hurried to his study, returned at once with two cigarette lighters which he set down on the coffee table.⁸²

He challenges her to identify which lighter had been in Franklin D. Roosevelt's pocket when he was assassinated, and which one wasn't. Which one had "historicity, a hell of a lot of it." and which one not. "Can you feel it?" he asks. Obviously she cannot, its all in the head, it's what you know about the object which constitutes historicity.

Finally she says,

"I don't believe either of these two lighters belonged to Franklin Roosevelt," the girl said. Wyndham-Matson giggled. "That's my point! I'd have to prove it you to with some sort of document. A paper of authenticity. And so it's all a fake, a mass delusion. The paper proves its worth, not the object itself!"⁸³

He shows Rita the framed Smithsonian Institution's certificate of authenticity,

the paper and the lighter had cost him a fortune, but they were worth it - because they enabled him to prove that he was right, that the word "fake" meant nothing really, since the word authentic meant nothing really.⁸⁴

Rita shows an understandable disappointment at having her joy at finding old objects debunked. The idea that it doesn't matter whether an object is new or old doesn't sit well with her feelings about the past, and much to her lover's chagrin she decides to go home. The reader feels an obvious sympathy for Rita's view. After all Wyndham-Matson's position effectively relegates our memories to the status of unverifiable, and therefore meaningless, statements about the past. The determinacy of these statements can only be settled by reference to documents, photographs, etc., and only by virtue of such artifacts constituting our history. Once one begins to doubt the documents and the photographs a situation of infinite regress is instigated whereby all things begin to be questioned. Stripping away the illusions may be useful, but it can also lead to unnecessary confusion.

Wyndham-Matson's observations are not so much profound, as the justification for sharp business practice. The appeal of verifiability does not wipe out the fact that he is in the business of fooling the public. Where the fooling around becomes fraud is not so clear.

The characters in Ubik are similarly thrown back on the resources of the marketplace, in order to resolve their epistemological problems. Because apart from the malevolent influence of Jory, there is another force at work, apparently assisting these characters in search of reality'; the absolute in a spray can, Ubik. Ubik is not just everywhere, as its name suggests, but it is everything. The advertising jingles which head each chapter, proclaim the merits of this product in each of its successive manifestations. As a roll-on deodorant, a bra, a razor, a germicide, a breakfast cereal and finally as God.

I am Ubik. Before the universe was, I am. I made the suns. I made the worlds. I created the lives and the places they inhabit; I move them here, I put them there. They go as I say, they do as I tell them. I am the word and my name is never spoken. The name which no one knows. I am called Ubik, but that is not my name. I am. I shall always be.⁸⁵

This passage, appearing at the head of the final chapter, is the last word on the ultimate commodity. Fitting describes it as a "theological super-ad".⁸⁶ For me, it encapsulates the chief problem which many readers find with Dick. On the one hand, Ubik is a commodity, an all-purpose "reality support", and advertised thus:

by making use of one of the most advanced techniques of present day science, the reversion of matter to earlier forms can be reversed, and at a price any conapt owner can afford. Ubik is sold by leading home-art stores throughout Earth.⁸⁷

On the other hand, it is all that Dick allows them. Despite its shoddy advertising, despite the humour, so typical of Dick, at the expense of another over-hyped product of the American dream, it remains, in terms of the book, the symbol of vitality and life. As in The Man in the High Castle, one's attitude toward the products of a crazy technological society, (about which Dick remains ambiguous), is crucial to the characters' perceptions concerning the epistemological dilemma.

The invocation of the pragmatic and prosaic in the face of the apparently profound is characteristic. By dissecting the problem of false vs real in such terms Dick takes the metaphysics out of metaphysics. The terms in which Wyndham-Matson casts the argument are what Kennick describes as 'explicitly' grammatical; it is an argument about the use of the word 'fake'. When Dick invokes the spectre of commercial interest and market forces by casting the argument in the mouth of Wyndham-Matson, it ceases to become a purely philosophical, i.e. grammatical, issue. One interpretation of Dick's obsession with advertising and commercial forces lines him up with Ballard in the project he outlines for science fiction. In his introduction to Crash! he writes,

I feel that the balance between fiction and reality has changed significantly in the past decade. Increasingly their roles are reversed. We live in a world ruled by fictions of every kind - mass merchandising, advertising, politics conducted as a branch of advertising, the instant translation of science and technology into popular imagery,.... we live inside an enormous novel.³⁸

Ballard seeks to break science fiction out of the ghetto by the adoption of modernist and most-modern techniques of writing; by getting away from space-ships and the far future, "all this stuff which I felt was basically rather juvenile, to writing a kind of adult science fiction based upon the present".⁸⁹ "the function of the writer" he says,

is no longer the addition of fiction to the world, but rather to seek its abstraction, to direct an enquiry aimed at recovering elements of reality from this debauch of fiction.⁹⁰

Ballard directs his enquiry at the "internal landscape" of the mind, "where old categories of thought would merely be an encumbrance"⁹¹. This solipsistic withdrawal however, far from breaking down the old categories of thought merely re-states them. Doubt of reality leading to the classic Cartesian affirmation of the reality of our own mental states. I have shown in this chapter how Dick's stance vis-a-vis epistemology re-states the sceptic's questions in terms of actual behaviour. For Dick, to withdraw into the mind in order to resolve these problems would be to submit to 'reality', he therefore takes these problems of philosophy 'out onto the street'. Here I see a major divergence between Dick and the so-called 'new-wave' writers, and in this disjunction the key issues in the current dilemma of science fiction.

CHAPTER FOUR

Science Fiction : The Speakeasy of Philosophy

I firmly believe that science fiction, far from being an unimportant offshoot, in fact represents the main literary tradition of the 20th Century, and certainly its oldest - a tradition of imaginative response to science and technology that runs in an intact line through H. G. Wells, Aldous Huxley, the writers of American science fiction, to such present day innovators as William Burroughs.¹
(Crash! intro.)

This idiosyncratic view of the history of 20th century literature, and of science fiction in particular, forms part of Ballard's introductory remarks to his novel Crash! The tradition he is referring to must be that of some parallel literary world, because, far from being the "main literary tradition" of the 20th century it has the status of little more than cheap pornography, and is often sold in the same stores. Wishing it were otherwise won't make it so.

Vonnegut is refreshingly candid about why he wishes to estrange himself from the "back-slapping coterie who are proud to call themselves SF writers". Firstly, because many 'serious critics' mistake the "file drawer labelled 'science fiction'" for a "urinal"², secondly, "because most people regard science-fiction writers as interchangeable with comic-book writers, as they frequently are", and "finally because I thought it was costing me a lot of money in reputation".³

Lem suggests a series of more literary reasons why writers might wish to get out of the ghetto. Science fiction's sense of playfulness, he believes, is no longer underwritten by 'serious' intent to say something fresh about science or the effects of technology. It is content to play in its "domesticated universe". The conventions of time and space travel by now so familiar to readers of science fiction, have done away with the mystery, the vastness, the silent horror of space.

The universe of SF is not only miniscule simplified and lukewarm, but it has also been turned towards its inhabitants, and in this way it can be subjugated by them, losing thereby the 'indifference which causes man to project continually new enigmas to be solved and secrets to be lifted, in the vain hope to get there the answer to the question of his own meaning. The universe of SF there is not the slightest chance that genuine myths and theologies might arise, for the thing itself is a bastard of myths gone to the dogs. The SF of today resembles a "graveyard of gravity", in which that sub-genre of literature that promised the cosmos to mankind, dreams away its defeat in onanistic delusions and chimeras - onanistic because they are anthropocentric.⁴

Lem effectively accuses science fiction of trying to have it both ways. When a serious intent is imputed to science fiction, he explains,

for work which would reflect on the place that Reason can occupy in the universe, on the outer limits of concepts formed on Earth as instruments of cognition, or on such consequences of contacts with extraterrestrial life.⁵

critics and writers tend to shirk their responsibility and assert that after all, the devices of science fiction are only entertainment.

Whoever brings up the heavy artillery of comparative ethnology, cultural anthropology and sociology against such devices is told that he is using a cannon to shoot sparrows...; once he falls silent, the voices of the apologists for the culture-shaping anticipative, predictive and mythopoeic role of SF are raised anew.⁶

As long as science fiction writers continue to rework the old themes of time travel, constructing a robot, cosmic contact, cosmic invasion and of course ultimate catastrophe for the human species it is likely that science fiction will continue to occupy an ambiguous place in literature. Lem characterizes the foregoing list as the main "geneological types" in the "evolution of SF". Those exponents of the last category known as the 'new wave' (Bradbury, Ballard, Brunner, etc.) have consciously attempted to bring science fiction in line with 'serious' literature. Lem comments,

The revolt against the machine and against civilization, the praise of the "aesthetic" nature of catastrophe, the dead-end course of human civilisation - these are the foremost problems, the intellectual content of their works.⁷

He suggests that in their eagerness to rid themselves of "the stigma of cheap and defective SF" the 'new wave' have given up "all that constitutes its cognitive value".⁸ The inevitability of global catastrophe which Ballard, for example, presents as given, and imminent, is a kind of watershed forcing the writer to concentrate on 'inner space' rather than the 'outer space' which in Ballard's worlds remains unattainable. The lack of time-travel, space-ships, robots and mind-reading, seems to guarantee that here at last science fiction has come of age.

In fact an examination of Ballard's work, and that of other 'new wave' writers, shows that the pessimism which characterizes their work is merely a cloak of gloom thrown over old science fiction themes.

J. G. Ballard's Literature of Extinction

Ballard's short story, 'The Voices of Time' for example, is remarkable in that it manages to cram together an abundance of stock science fiction themes without once appearing stale. I am the first to acknowledge the charm of Ballard's tales but I am in a way asking "Do we want to be charmed?" 'The Voices of Time' suggests that the world is about to end because the sun is getting cooler, this old recipe is garnished with concomitant mutations and devolution of species, including man, and the precise prediction of when the universe will end. Ballard makes the scientist Powers the embodiment of Jungian man. A split personality, the one continuing with his scientific experiments whilst the other half, the unconscious half if you will, is off building a giant mandala, a cosmic clock suggesting Powers resonance with the vibrations of the universe. In Powers' menagerie there is a Chimpanzee with a two-hundred word vocabulary, plants with nervous systems, lead shielded mutant frogs, and a 'girl from Mars', elsewhere we find crazy scientists, messages from another galaxy, and enforced evolution. We have seen these elements before in Bester and Van Vogt, but Ballard characteristically treats the paste like it's the real thing.

Van Vogt and Smitz's treatment of the evolutionary theme in 'Research Alpha' will serve to indicate interesting thematic parallels and linguistic divergences. In the following scene the prematurely evolved Barbara Ellington develops a new awareness,

She had developed brain mechanisms that could do things with space - do them on an automatic level, without her conscious mind knowing what, or how. Fantastic things..... As she lay there, a new nerve centre in her brain moved out and scanned a volume of space 500 light-years in diameter. It touched and comprehended clouds of neutral hydrogen and bright young O-type stars, measured the swing of binaries, took a census of comets and ice-asteroids.⁹

Eventually of course her mind reaches out and touches the omnipotent "Great Galactics" who are the benign Gods watching over life in the universe. Compare this with Gully Foyle's evolutionary lunge, his jaunt to the edge of the Universe¹⁰, and then with the description of Powers' accelerated evolution in 'Voices'.

Above him he could hear the stars, a million cosmic voices that crowded the sky from one horizon to the next, a true canopy of time. Like jostling radio beacons, their long aisles interlocking at countless angles, they plunged into the sky from the narrowest recesses of space. He saw the dim red disc of Sirius, heard its ancient voice, untold millions of years old, dwarfed by the huge spiral nebulae in Andromeda, a gigantic carousel of vanished universes, their voices almost as old as the cosmos itself. To Powers the sky seemed an endless Babel, the time-song of a thousand galaxies overlaying each other in his mind.¹¹

With Ballard there is certainly more poetry, a lyrical capture of technological jargon, but nothing is cognitively new or different from the preceding examples. The tiredness of the basic idea is easily illustrated by the treatment of time in the story.

Not only can the plants in Powers laboratory see time, but the description of how Powers himself perceives time after his evolution embodies precisely the metaphor which in my second chapter I identified as the source of many of the misleading notions about the nature of time.

Like an endless river, so broad that its banks were below the horizon, it flowed steadily towards him, a vast course of time that spread outwards to fill the sky and universe, enveloping everything within them.¹²

This 'river of eternity' image is as old as, dare I say, time itself, Ballard moreover is not above interpolating the names and numbers of a few constellations to lend a little scientific credibility to the description. One suspects with Ballard, that as with the Surrealists, the fascination for the trappings and debris of technology is mere fetishism. Invariably in his early stories there is the scientist, the observer measuring the rate of the winding down of some process, or the approach of water, sand, and cataclysm. Couched in scientific terminology, we are given to believe that the approach of this cataclysm is as inevitable, has the overwhelming certainty of a mathematical formula. We can see this in The Drowned World, 'The Delta at Sunset', 'The Illuminated Man' and 'The Garden of Time', always the steady measured approach, sometimes willed, always inevitable, always submitted to. Sublimely accepted as a scientific certainty, which by default, catalyses some deeper purpose within the heart of man transcending the mere physical. With Ballard, scientific procedures are reduced to the status of mere ritual in the face of the approaching end.

The role of the experiments of Powers and the calculations of Kaldren, reduces these activities to psychological tics, manifestations of neuroses. Kaldren is the melting pot of the artistic and scientific, his response to these doom-laden calculations is to assemble his "terminal documents", not least of which is the cosmic countdown provided by the radio signal being beamed from Canes Venatici. This "thoughtful" indication of the "real time", we are led to believe, is being supplied by superior beings many light years away. Once again the benign Gods at the fringes of the universe.

Ballard, far from reasoning that the themes so peculiar to science fiction demand a more rigorous philosophical approach, has opted for a stylistic grafting to match the charm of the ideas. In a letter to Norman Malcolm in 1945, Wittgenstein comments on the "charm" of Freud's ideas, and comments that although initially he had been attracted by the ideas, under the light of reason he found them full of "fishy thinking".¹³

Examples of "fishy thinking" in Ballard are easily found. In 'Voices' Powers has a plant that "literally sees time"¹⁴, and a spiderlike insect whose optical sensitivity has "shifted down the band" such that it is only sensitive to gamma radiation. We are asked to believe that the former is in the same class as the latter and that this constitutes the breaking down of old categories. Whereas the former is logically impossible and the latter a mere extension of an existing sense.

I noted in my discussion of 'The Country of the Blind', that science fiction routinely attempts to weave some mystery around the extension of our senses; either the accenting of an existing sense or the suggestion of a sixth sense. Telepathy, pre-cognition, and synaesthesia all arise from this age old fantasy. Ballard routinely confuses the nature of such extrapolations.

Thus, far from throwing off old modes of thought, Ballard has slipped back into precisely those patterns of thinking which have characterised science fiction since its inception. The reasons for this can be discerned through the various 'manifesto' statements which Ballard has made.

The fictional elements in the world around us are multiplying to the point where it is almost impossible to distinguish between the "real" and the "false" - the terms no longer have any meaning. The faces of public figures are projected at us as if out of some endless global pantomime, they and the events in the world at large have the conviction and reality of those depicted on giant advertisement hoardings. The task of the arts seems more and more to be that of isolating the few elements of reality from this melange of fictions, not some metaphorical "reality", but simply the basic elements of cognition and posture that are the jigs and props of our consciousness.¹⁵

The aim of getting down to the "basic elements of cognition" Ballard shares with Chomsky. How they plan to discover these elements however, differs considerably. Colin Greenland comments on the parallels which exist between the 'internal landscapes' of Ballard and the work of the surrealists. Often the elements will be fetishistic. Thus although the 'surreal' effect is often achieved through the juxtaposition of a familiar object and a peculiar situation, as with Dali's crutches and giraffes and excreta, the content is clearly psychological. Greenland points out that Dali's pictures often illustrate dreams and make specific reference to Freud.

The imagery of these painting is allegorical, predisposing us to examine it analytically. Dali offers his subjective landscapes as a comment on memory and perception, and encourages us to decipher them according to the generalised systems of values first tabulated by Freud. This is applied fantasy. Surrealism used psychoanalysis to investigate the latent content of reality - an alliance of creative and analytic procedures.¹⁶

Concealed in Greenland's last sentence is a prejudice which constitutes in itself the single most powerful obstacle to the understanding of Wittgenstein and the purpose and thrust of this study. As long as the analytical work which typifies Wittgenstein's method is seen to be in opposition to 'creative' expression which characterises literature and art, it is difficult to take my point. The demystification which the techniques of Wittgenstein entail undermine the enigma which the surrealists seek to create. Where Ryle, for example, attempts to expose the manner in which the category-mistake effectively short-circuits thinking, leading to paradox and enigma, the surrealists seek to make a virtue of it.

Greenland goes on to describe how surrealism was an 'artistic' school with 'scientific' purposes. And, whilst conceding that Einstein and Heisenberg had re-instated the imagination, he concedes that for all its scientific posturing, its manifestos and pseudo-scientific language, it is quite probable that "the surrealists appreciated science not at all".¹⁷ Because of the apparent contradictions of common-sense which both relativity and quantum theory entail, Greenland believes that a blank cheque was written for all kinds of imaginative abuse of reality in the guise of "scientific imagination" and the exploration of inner reality. This cheque was underwritten by the disruption of reality, which by the 1950's was under reconstruction through the fictions of the mass media. Greenland comments,

Art, Ballard decided could only be re-organised on the second principle of surrealism: the critical analysis of reality.¹⁸

Recovering reality from the "debauch of fiction", involves Ballard's characters in a retreat into themselves which is so complete as to render external reality a meaningless tableau. The encroachment of external reality on his characters' lives, through whatever kind of catastrophe, catalyses psychic forces deep within his characters, making accessible "the luminous beaches of the submerged neuronics continents",¹⁹ the reality of "landscapes of the unconscious".²⁰ The poetic amalgam of scientific language and the language of various schools of psychology is a Ballardian attempt to subvert the official version of reality represented by science.

That science is shown in his novels and short stories as impotent in the face of some natural disaster. Characters like Powers, Traven and Faulkner can know exactly what is happening, and although brimming over with scientific knowledge, be powerless to do anything. Invariably there is the suggestion, as in 'The Voices of Time' and The Drowned World that human beings are an evolutionary dead-end and are about to be replaced. In the case of 'Voices' by unspecified mutants, and in The Drowned World by reptiles. By stressing what Ballard calls man's "biological isolation in relation to the universe"²¹, and his finiteness in the face of "this panoply of alternatives from which he is excluded"²², he sets the stage for the spirit of submissiveness in the face of disaster which precipitates his characters into plumbing their own psychic depths. Maitland's temporary blindness in 'The Gioconda of the Twilight Noon' is enough to make him withdraw into the "cliffs" and "caverns" (very literally a landscape) of his mind.

It was almost as if the barriers between the deepest levels of the nervous system and the external world had been removed, those muffling layers of blood and bone, reflex and convention....²³

We are left in no doubt that Maitland feels that the world into which he withdraws is more real than the one in which he lives and is blind. The atrophy of one of his senses precipitates him into this magical world of misty surrealist childhood associations.

Ballard's aim in his fiction is to indicate that there is a radical alternative to current perceptions of reality.

He is anti-science in that he believes (as we have seen that many other writers believe), that the version of reality science imposes upon us is just one of a "panoply of alternatives". To get beyond the reality structured by our perceptions, associations, scientific knowledge and bodily needs, much as Poole tries to in the 'Electric Ant' story, is the aim of his protagonists. Invariably his stories are either of willed attempts to perform this trick of disassociation, or submissions to such a process. 'The Overloaded Man' for example, takes literally the Barthian assertion that modern man is overwhelmed by signification. The protagonist's 'talent' is that he can "de-identify" signs and objects; break them down perceptually until they are unrecognisable to him. He sits upon his veranda erasing his awareness of the identity of the houses on the other side of the garden, until they became a "cubist landscape", "a collection of random white forms beneath a blue backdrop"²⁴. Faulkner finds that he is particularly successful with "over-associated" objects such as washing machines, cars, televisions and consumer goods.

Stripped of their accretions of sales slogans and status imperatives, their real claim to reality was so tenuous that it needed little mental effort to obliterate them altogether.²⁵

In this cubist universe Faulkner's conceptual apparatus systematically diffuses. Ballard compares it to a kind of trancing, where you hear people speaking but deliberately do not listen to the words. The sense of the words is blocked out.

'I may actually be stepping out of time,' Faulkner speculated, 'Without a time sense consciousness is difficult to visualize. That is, eliminating the vector of time from the de-identified object frees it from all its everyday cognitive associations. Alternatively, I may have stumbled on a means of repressing the photo-associative centres that normally identify visual objects, in the same way that you can so listen to someone speaking your own language that none of the sounds has any meaning. Everyone's tried this at some time.'²⁶

Ballard's failure to provide anything other than mannered prose, or cliched science fictional explanations when addressing epistemological issues is indicative of an unwillingness or inability to tangle with the problem. It is not simply enough to doubt reality, or as we saw with Moore, to assert what we know about reality. Moore came along and refuted the sceptics doubts, effectively by turning them around and saying that he didn't doubt them, but "knew them for certain". Similarly Ballard, to stem the tide of juvenile and pointless science fiction, has taken its science, its conventions, its optimism and its language, and subverted or denied them. Moore's engagement with the sceptic, despite appearing to break all the rules, turned out merely to confirm certain formal moves and methodologies which characterised the epistemological argument. Ballard it transpires has similarly taken on science fiction on its own ground. As we have seen his interests remain science fictional. He is fascinated by time. He is fascinated by the extension of the senses. He wants to talk about epistemology, about reality and consciousness. He is fetishistic about technology. He is romantic. By looking at these features of classic science fiction from the other end of the telescope Ballard finds himself in the Moore-like position of mistaking form for content. ..

He does this in two ways, firstly by presenting his formal innovation, narrative fragmentation, etc., as features of content, and secondly, by treating as content those aspects of science fiction which have long been established as its formal conventions.

The roots of the former can be seen in those elements of modernism which Lukacs considers characteristic. The negation of reality in the face of man's isolation and solitariness found expression in modernism in "an incoherent stream of consciousness" or other such stylistic distortion designed to emphasize the inalienability of a subjectivity which was universal. Lukacs observes that if the "dialectic between the individual's subjectivity and objective reality"²⁷ is denied, "disintegration of personality is matched by disintegration of the outer world".²⁸ In Ballard's stories of global catastrophe, often the main catastrophe, and the focus of the narrative turns out to be the collapse of the main character's personality.

Lukacs continues,

Only in the interaction of character and environment can the concrete potentiality of a particular individual be singled out from the 'bad infinity' of purely abstract potentialities, and emerge as the determining potentiality of just this individual at just this phase of development.²⁹

Here we see clearly the divergence between Dick and Ballard. Dick's response to the epistemological problems posed by technology out of control, the decline of civilization and severance of man from nature through the increased destruction of the environment, is represented in his various characters' stubborn, and invariably futile attempts to make sense of it all. Often their only hope and desire is to preserve some ordinary human value despite the surrounding chaos. Ballard, wary of the platitude, attracted by the fatalism and emasculation, the abnegation of choice promised by ecological disaster, allows his characters to be overwhelmed by a combination of natural and unnatural forces. Unlike Dick's characters, they know exactly what their predicament is and it is often this knowledge which emasculates them. Clearly Ballard is not interested in establishing the "concrete potentialities" of his characters, neither however is there a notable commitment to defining the nature of the "abstract potentialities" which he is manifestly suggesting as alternatives. The closest one gets to a model of his alternative to conventional views of reality, is contained in his description of the sets of disjointed images which comprise The Atrocity Exhibition. In what Ballard himself describes as a Surrealist technique, by getting rid of "the great tide forward of conventional narrative", and juxtaposing the "important pieces",

it achieves critical mass as it were, it begins to ignite and you get more things being generated. You're getting crossovers and linkages between unexpected and previously totally unrelated things, events, elements of narration, ideas that in themselves begin to generate new matter.³⁰

The suggestion here is that there is so much to say and that the themes are so obvious, that if you cram everything together with style some kind of meaning will arise. Look after the style and the content will look after itself. It is the spontaneous combustion theory of literature. Like rubbish tips that spontaneously ignite due to the sheer weight of rubbish, Ballard's conglomerations of images and ideas are collaged together in the hope that the sheer weight of association, or resonances as he prefers to call them, will guarantee some kind of meaning or sense. Just as his characters submit to the unconscious drift of their own psyche, Ballard submits to the unconscious drift of language. We have come a long way from Orwell's "let the meaning choose the word".

Ballard's technique partakes in many ways of those 'techniques' which writers of 'structuralist' novels, notably the Tel Quel group espouse. As Culler remarks, Kristeva's statement that "semiotics remains an investigation which discovers nothing at the end of its quest but its own ideological moves"³¹, suggests a programme that is a little difficult to imagine. Those "principles of relevance" which she might seek in a text, whether they identify rhymes or anagrams or whatever, cannot be free of the ideological basis which she seeks to escape. The play of significance becomes no more than a game. In any novel or text significance is conferred by the overall organising principle. This principle must relate to forms outside the text in order to constitute more than an intellectual exercise.

What is more, the principle of no organising principle, (which is the obvious way of avoiding the ideological influences of form) is only interesting once. However, there are a myriad of different ways of having no organising principle, Ballard has found one and, because he eschews any kind of cognitive principle, talks about significance arising from it by default.

The disruptions of narrative which characterize Dick's work come about as a result of his challenging in a concrete way the categories of "life", "death", "reality", etc. That is, the form is disrupted by the content, rather than vice versa. Changes in style and structure will not in themselves bring about altered concepts and perceptions. In mistaking the conventions of science fiction for its content, and addressing them as such Ballard finds himself still trapped by those conventions. To a large degree, he remains trapped because he retains a fascination for the thinking which generated these conventions. Wittgenstein says that the examples of known truths which Moore gives remain interesting because they play "a similar role in our system of empirical judgements".³² The given truths of the world of science fiction, having sprung from the kind of thinking which Moore tries to rationalize, having gathered on the way various bits of hardware and an assortment of mythologies, time-machines, hallucinogenic drugs, parallel worlds, faster-than-light-drives, robots, etc., hardware which unquestionably has its blueprint in philosophy, still have their roots firmly in that philosophy.

It is not simply enough for Ballard to sweep away the hardware, because the hardware, as we have seen with Dick, is the only means the writer has of controlling a fascination for problems about knowledge and thought which Wittgenstein variously describes as "superstitious"³³, "deep disquietudes"³⁴, "bewitchments of our intelligence"³⁵, and all of which appear deep because they are deep in the form of our language. Ballard's dislike of the hardware leads him to the more extreme position of distrusting language and logic. Clearly he is right to distrust certain aspects of language, unfortunately the aspect he chooses to reject is its logical face. His anti-rational stance opens up for him a battlefield which seems to take on logic, science and the whole project of understanding the world, whereas he turns out to be fighting himself. Like the Cartesian sceptic he distrusts the tools of thinking. Unlike Descartes he doubts the reliability of language and sees virtue in language's apparent ability to rise above logic. All of the science fictional conventions, which Ballard shuns, embody, paradoxically, those aspects of language which he seeks to assert; the category-mistake, the misleading metaphor, the poetic image. And Delany and Russ would probably be the first to point out, they were there all the time but nobody noticed them. Which is what I meant about them being right, but for the wrong reasons. All of science fiction's most persistent themes, its need to get to the bottom of the facts of nature, its urge to understand the basis, or essence, of everything, (as so cogently plagiarised in the Douglas Adams books), is not the search for something new, but as Wittgenstein remarks, it is as if "We want to understand something that is already in plain view".³⁶

We feel as if we had to penetrate phenomena: our investigation however, is directed not towards phenomena, but, as one might say, towards the 'possibilities' of phenomena. We remind ourselves, that is to say, of the kind of statement that we can make about phenomena.³⁷

If I say of someone "He isn't an automaton" it seems to raise the possibility that he might be, but that I have dismissed it. In the normal world this qualifies as a Moore-type statement. Because unless the possibility does exist that this person could be an automaton it makes no sense to say "I know" he isn't. The "I know" is implicit. Firstly, it appears to be a statement about the kind of things we can say about bodies and minds, secondly, it seems to allow for the eventuality that things may turn out to be other than we think. It dares you to prove the statement wrong. When in science fiction the statement is proved wrong (or right), it ceases to be a statement about what we can know about minds and bodies, and becomes simply a statement about minds and bodies. The science fiction story as a whole may be construed as treating of the possibilities of phenomena, but the individual statements in the story treat of those phenomena. Science fiction which contains long tracts of scientific, philosophical, or theological discussion, often fails in its task because without, good jokes, good characters, style, wit, relevance, or genius, one may as well read the text book.

The particular advantage of post-war science fiction in pursuing philosophical issues, is that the level of parody of the old forms which are, as I say, the formal conventions embodying the 'paradoxical' world view, allows the writer to paint, philosophically speaking, with a very wide brush.

By embracing all science fiction's gimmicks and ludicrous ideas (instead of dismissing them as Ballard does) Dick finds himself with a ready-made vocabulary for dealing with the kind of epistemological tangles which fascinate him. Further he does not make the mistake of trying to penetrate these phenomena, they are like Moore-type propositions in the context of science fiction, it is neither sensible to confirm or deny knowledge of aspects of the science fictional world view which prevail, because they act like the so-called common-sense assumptions which we have about the world. Because, therefore Dick's characters can talk in a different way about time, minds and life, their epistemological disputes point up aspects of epistemology in general. A statement like, "I've been waiting a long time for last year"³⁸ is unusual even in the world of Now Wait for Last Year, but we do not find ourselves searching for an application for it. That is we do not have to ask ourselves what kind of statement it is before we can find a role for it. Philosophical statements are often of that kind. They appear deep because they have no role outside philosophy, yet can be made in a perfectly ordinary context without provoking comment. For something to appear deep, or epistemologically astonishing it is clear that one needs to be involved in a question about the kind of statement that is being made, i.e. what kind of role it has in what kind of language-game.

If one is writing a statement in a piece of science fiction, particularly if it is dialogue, one needs to set it within a context. (In this sense failing to give it a context is a context, but not a very interesting one).

Immediately the writer is forced to look for ways of surprising the reader and suggesting philosophical puzzles. Using sentences that are patently ungrammatical is an obvious way, "I met myself tomorrow." for example. Making metaphors and turns of phrase literal is another, "I must pull myself together". Making Moore-type statements is another, "I know I'm alive".³⁹ This is trivial rule breaking. The appearance of depth which "Machines Who Think" and "The Day it Rained Forever" as statements have, is largely due to the grammatical construction. The ideas which they embody, that a machine might be considered a person, and that it might never stop raining, are commonplace.

Science fiction's relation to language is an ambiguous and precarious thing. Many of science fiction's flights of imagination are only made possible, and in certain respects only remain interesting because of aspects of language which I have highlighted. Asimov's Three Laws of Robotics are a mundane example of this. Asimov himself confesses that his robot stories relied on the fact that "There was just enough ambiguity in the three laws to provide the conflicts and uncertainties required for new stories".⁴⁰ This "ambiguity" inheres in attempting a strictly logical interpretation of the English language commands. 'Liar',⁴¹ and 'Satisfaction Guaranteed',⁴² for example revolve entirely around the robots' interpretations of the word "harm" in the first law. In the former story a robot tells a lie to protect its mistress from the emotional harm which the truth would have entailed.

Such stories rest on the assumption that the robots are programmed in the vernacular, and rely on finding chinks in the logical structure of the English language.

Other explicit attempts to force a change in our concepts of thinking, I noted in the neologisms and invented languages of my first chapter. The idea which Newspeak and Babel-17 embody that the form of language may contain an ideological bias, is taken to an extreme in Ballard's work, where the subversion of logic and normal narrative patterns are proposed as a means of de-railing the novel, and science fiction in particular, from the tramlines of language.

Between these extremes, I have inserted the view that the formal characteristics of language exert an influence on our thinking which leads us to formulate models of understanding, thought and language, which one needs to recognise and resist before one can begin the task of countering any ideological bias which one might discern. The failure to grasp why the various models of language suggested by Orwell, Searle, Whorf and Chomsky, and embodied in the stories of Delany, Bester, etc., are wrong, disarms any putative attempt on inherent ideological colouring in language.

Science fiction is particularly susceptible to puzzles about language and thought because of an inherent tendency to metaphysics, and because of widespread misunderstanding about the relation of language and the imagination.

The idea that breaking the formal rules of language, or of a genre, can generate new ideas, and condense complex ones, is part of the mythology of 20th century literature.

However, misunderstandings about how language works combined with a series of slipshod models, often renders such rule breaks trivial, or leads one, in the case of science fiction to imagine impossible things and to wrestle with imaginary problems. These imaginary beasts, like magic carpets and genies in lamps in Arabian Nights, are part of the fabric of science fiction and as such are not phenomena to be penetrated, but, because they are images of the impossible, serve to remind us of the relationship between imagination and language.

Notes.

Further Bibliographical details of all texts referred to may be found in the bibliography. For the purposes of reference, the following abbreviations have been used.

SFS Science-Fiction Studies.

SFS:SA Science-Fiction Studies: Selected Articles on Science-Fiction 1973-1975, ed. R. D. Mullen and Darko Suvin (Boston: Gregg Press, 1976).

When referring to the works of Wittgenstein the number pertaining to the remark rather than the page is cited unless otherwise indicated. The formal guidelines of the MLA Style Sheet, 2nd ed. (NY: MLA, 1970) have been adopted throughout.

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Notes on Chapter One.

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6. Patrick Parrinder, "The Alien Encounter: or Ms Brown and Mrs Le Guin," in Science Fiction: A Critical Guide, ed., Parrinder, p. 151.
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27. Russell Hoban, Riddley Walker (London: Jonathan Cape, 1980), p. 33.
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47. The Concept of Mind, pp. 148-49.
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52. Searle, "Beer Cans and Meat Machines," Minds, Brains and Science, The Listener, 15 Nov. 1984, p. 14.
53. Ibid., p. 15.
54. Ibid.
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58. "Beer Cans and Meat Machines," p. 16. From the artificial intelligence researcher's point of view, Searle's initial premise "that the programmers are so good at designing the programme" that the "answers are indistinguishable from those of a native Chinese speaker", renders his argument superfluous. Given that this "programme" is what AI researchers are attempting to achieve and finding so difficult, Searle has effectively assumed that the AI researchers have succeeded in their task. If conversations with the artificial intelligence so constructed are indistinguishable from conversations with people, the constructors of the machine are likely to be most insulted if Searle comes along and declares that the machine can't think. Searle's argument centres on his idiosyncratic definition of the word "think".
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65. Ibid., p. 120 (Ch. xi).
66. Ibid., p. 116 (Ch. xi).
67. Ibid., p. 118 (Ch. xi).
68. Ibid., p. 131 (Ch. xii).
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72. Wittgenstein, "Conversations on Freud," Lectures and Conversations, p. 43. Wittgenstein's view of psychoanalytic procedures, as expressed in these conversations, is that the Freudian approach is roughly equivalent to literary criticism posing as clinical method.

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93. "Science Fiction as Creative Revisionism," p. 67.

94. Tiger! Tiger!, p. 193 (Ch. xii).
95. Ibid., p. 227 (Ch. xv).
96. Ibid., p. 242 (Ch. xvi).
97. Ibid., p. 237 (Ch. xvi).
98. Hockett, "The Epistemology of History," The View from Language, p. 306.
99. In "Quantum Theory and Reality," Scientific American, 241 (1979), pp. 128-40, Bernard d'Espagnat argues that various principles associated with Quantum Mechanics, such as the principle of indeterminacy and Bell inequality, undermine procedures which begin from the premise that the world exists independently of human observation of it. Similarly, in "The Anthropic Principle," Scientific American, 247 (1982), pp. 114-122, George Gale demonstrates that given our view of the universe, it is inevitable that intelligence exists in it. That is, intelligence is not an accidental by-product of the universe, but the universe is an inevitable result of what we define as intelligence. The arguments have a Cartesian appeal, but inevitably founder on definitions of determinacy and intelligence respectively.
100. Kurt Vonnegut, Jr., The Sirens of Titan (1961; rpt. London: Coronet, 1975), pp. 199-200 (Ch. xii).
101. Ibid., p. 207 (Ch. xii).
102. Philosophical Investigations, 618.
103. James Mellard, "The Modes of Vonnegut's Fiction: Or Player Piano Ousts Mechanical Bride and The Sirens of Titan Invade The Gutenberg Galaxy," The Vonnegut Statement, ed. Jerome Klinkowitz and John Somer, (St. Albans: Panther, 1975), p. 188.
104. Samuel Delany, "Critical Methods: Speculative Fiction," Many Futures Many Worlds, ed. Clareson, p. 279.
105. The Sirens of Titan, pp. 60-61 (Ch. iii).
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112. Kurt Vonnegut, Jr., Slaughterhouse-Five (1969; rpt. London: Triad Granada, 1983), p. 61 (Ch. iv).
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