

A Revised Transcript of Robert A. Heinlein's 1941 Guest Of Honor Speech  
By David Wright Sr.  
Draft

By special arrangement with the Estate of Robert A. Heinlein, charter members [of The Heinlein Society] received a CD recording of the speech that started it all, a Limited Edition of "Discovery of the Future," Robert Heinlein's copyrighted Guest of Honor speech, given at the World Science Fiction conference, "Denvention," in July 1941. This version is the original; the only editing of it is sound editing to improve clarity of the original disk recordings by Walter J. Daugherty. [Quotation from the Membership Page of The Heinlein Society Website]

As I was working on my book, *Heinlein & Korzybski: Maps of General Semantics*, I was struck by the fact that this particular speech was highly inspired by Alfred Korzybski and his Theory of General Semantics.

After completing the book, I decided to look closer at the speech and since I had received the CD mentioned in the first paragraph as a Charter Member of the Society, I decided to do a transcript from the CD as it was apparent that there were considerable discrepancies between it and the version of the speech found in Yoji Kondo's *Robert Heinlein: Requiem And Tributes to the Grand Master*.

I was also able to obtain a photocopy of the original manuscript of the speech. It added considerably to my understanding of the speech, so I decided to include it and make this work a three-way view of the speech.

After preparing the first version of this revised transcript, I was able to obtain a photocopy of the original transcript made at the time of the speech. (This was a limited edition of 200 with a reprint of 100. Sold for 10¢ during the convention, an original is reportedly worth about \$1200 today). The transcript was listed as being done by an organization called Assorted Services, Inc., and it was much closer to my revised transcript so that I was able to use it to produce an even more correct version than that which I had originally done. In the transcript some previously questionable words were made clearer and some additional points were clarified which were not apparent from the spoken version alone. (See Note) This paper, therefore, represents the comparison of the original manuscript, the version from *Requiem* as well as the final results of the reconciliation between my transcript and the original transcript. I have retained the paragraph structure of the original transcript in this revised transcript and the paragraph structure of the *Requiem* version as well as that of the original manuscript has been modified to match it as closely as possible.

I have done the best that I could in faithfully transcribing all that is on the CD with the exception of a considerable number of 'uhs' and partial false starts. What might be considered by some as complete false starts are transcribed as they were heard. I have made no attempt to 'correct' grammar. You will note that there are a number of changes involving contractions. Where the *Requiem* version quite often separates constructions such as 'have not', I have replaced it with the corresponding contraction, such as 'haven't' whenever this has occurred. The reverse occasionally occurred.

Heinlein also starts many sentences off with 'and' or 'but'. These, for the most part, were found to have been present in the original transcript and they have been maintained in the revised version. The original transcript had many of these not at the beginning of sentences, but as continuations of previous phrases. I have maintained the original rather than what I originally transcribed.

I have included all of the spontaneous comments about the recording being made, the requests for information from others as well as their responses when these were audible, and other spontaneous remarks which do not directly relate to the message of the speech.

One curious section stands out. In the section where the work of E.T. Bell is mentioned, (paragraph 64), there are several words in the *Requiem* version around a break in transcript which simply do not occur on the CD that I have. I cannot explain why this is so. A break does occur, but doesn't include those words.

The words, phrases and sentences found in each version, but not in the other are double underlined. Generally, this results in one or two words at a time being underlined, or complete sentences, but occasionally, when most of a phrase or sentence is similar in both, but with transposed words, the entire phrase or sentence is underlined in both versions.

Some additional words or sentences in the revised transcript emphasize more clearly, (to me), the General Semantics connection. I will not go into that here, but will be treating the entire relevance of the speech to General Semantics in another paper.

I have numbered the paragraphs in the revised transcript at the end of each paragraph for reference purposes and time ticks from the CD are listed there also. The paragraph numbers are enclosed in "{}" for easy searching. (There are a total of 72 paragraphs).

The manuscript version is presented as closely as possible to match the other two versions. There are two occasions, (paragraphs 34-35 and 51), where the order is different. I have chosen to show the out-of-sequence sections aligned with the two transcripts of the spoken speech rather than as they occur in the manuscript.

Some few words were unreadable and are marked with 'xxx'. Some were clearly struck out and where this is clear they are marked ~~as struck out~~. It is likely that the unreadable words were also strikeouts. Paragraphs of the manuscript are broken when necessary to match the transcripts. Words with emphasis, and titles, in the manuscript are single underlined just as they are in the photocopy. In the transcripts, emphasized words are given in italics. There are some differences in what I considered emphasized versus those in the *Requiem* version. Titles of books and magazines are also given in italics.

The word count for the original manuscript was 3392, that for the *Requiem* version, 6656 and the revised transcript, 7866.

Dr. Kondo confirmed to me that the version which appeared in *Requiem* was identical to the version given to him by a fan except for a sentence or two that Virginia Heinlein had edited. Presumably, since this version is so different from the original transcript, then it must have been heavily edited prior to it being received by Dr. Kondo. At this point, I am presuming that this was the version which appeared in the fanzine Vertex and was edited either by Forrest Ackerman, who sold the transcript to Vertex, or by the editors themselves at Vertex. (Vertex subsequently obtained the copyright of the speech for Mr. Heinlein). I have not been able to confirm either of these possible presumptions.

As a Heinlein and Korzybski scholar of sorts, I feel that this presentation is highly significant for scholarly research into the life and works of Robert A. Heinlein, and especially in his relation to General Semantics.

I hope that you will enjoy reading this revised transcript and comparing it with the original manuscript and the *Requiem* version, as much as I did in making it.

It is obvious to me that in spite of Heinlein deprecating his speaking ability, "I get all tangled up. I do better on the typewriter", that he was a fairly good at extemporaneously expanding his main thoughts in a very coherent manner.

Added to the end of the original transcript was this paragraph.

"During the question period, which followed an intermission of about three-quarters of an hour, Mr. Heinlein dealt with the inquiry of T. Bruce Yerke as to the position when faced with conscription of a Conscientious Objector with the long outlook on life rather than the temporal; Morojo's question about the advisability of using stimulants and soporifics such as mentioned in some of his stories (benzedrine surrogate, "sleepy pills"); Milton A. Rothman's slip of paper concerning how a mere mortal could hope to gather trustworthy data from the tissue of lies, half-truths, propaganda, etc, disseminated by press, radio, films and individuals in general. Unfortunately, the Question Period was not recorded."

Very unfortunate, indeed!

It is also obvious from all of this that Heinlein mirrored at least one of his characters in his beliefs.

"When you get rolling there is often a better, more alive way to say a thing."  
Lorenzo Smythe *Double Star*

My grateful thanks to the Heinlein Trust for permission to publish these transcripts as well as the original manuscript.

Note: In particular, having to compare the original transcript with my own, forced me to recognize that I had possibly mis-identified certain words due to 'hearing' what I expected to hear. On review, I could see that the original transcript was correct in some of those. In addition, the word 'sacred' was attributed to Mrs. Heinlein whereas there was no indication on the CD that this was specified.

GUEST OF HONOR SPEECH AT THE THIRD WORLD SCIENCE FICTION CONVENTION DENVER, 1941	GUEST OF HONOR SPEECH AT THE THIRD WORLD SCIENCE FICTION CONVENTION DENVER, 1941	GUEST OF HONOR SPEECH AT THE THIRD WORLD SCIENCE FICTION CONVENTION DENVER, 1941
THE DISCOVERY OF THE FUTURE <i>Original Manuscript</i>	THE DISCOVERY OF THE FUTURE <i>Requiem Version</i>	THE DISCOVERY OF THE FUTURE Revised Version

Mr. Chairman, Ladies, and Gentlemen: Here in my hand is the manuscript of a speech. If it works out anything like the synopses I have used, this speech will still be left when I get through. I have a prepared speech here entitled The Discovery of the Future. I am going to put it down here and if it works out anything like synopses I

Future. I shall now lay it aside and talk about anything that comes into my head

Before I start, I want to mention an idea that might be fun. It was an innovation in political speaking introduced in California by Upton Sinclair that raised Cain with the ordinary run of political speakers: answering questions from the platform. But I want to put one reservation on it, and that is that questions should be in writing, with names signed, so we can read them into the mike so that I can have clearly in mind what the questions are.

During the course of the last day or so, I have gathered the impression that quite a number of people are interested in the background of my stories; and, in some cases, in my social and political ideas, economic ideas, etc.—some of which, but not all, shows in my stories. Some of them have evidenced an interest in my own personal background. So, if the question comes along, I will do my best to answer it, perhaps dodging the embarrassing ones a little.

Your chairman told me that no time limit had been placed on my remarks—I presume that he wants my usual three-hour speech. We are the lunatic fringe, you and I, the crazy fools who waste their time reading and writing that wild stuff which comes out in those lurid magazines with the ridiculous machines on their covers. Our acquaintances pick up a copy in our homes and say, “Good Lord; do you actually read junk like this?” We admit it and from then on they look at us with quite a bit of suspicious[sic]. We aren’t quite right in the head.

To get to the talk itself: THE DISCOVERY OF THE FUTURE. I was told that there was no time limit, so I assumed that he wanted my usual three hour speech. Or, perhaps, we can just keep going until the hall is cleared. Forry [Ackerman] told you that I have been reading science fiction for a long time. I have, I have been reading it as long as I could get hold of it, and I probably experienced much the same process most of you did: parental disapproval, those funny looks you get from friends, for reading “that kind of junk.” We here, the science fiction fans, are the lunatic fringe! We are the crazy fools who read that kind of stuff—who read those magazines with

have ever used, this speech will still be left when I get through. 00:15 {1}

Before I start in, I want to mention an idea that came to me that I think might be fun. It was an innovation in political speaking and it was introduced out in California by Upton Sinclair that raised Cain with the ordinary run of political speakers: that of asking questions from the platform, any questions. I mean asking, answering questions from the platform. That’s not going to look so good on the platter is it?) There’ll be lots of those. I want to put one reservation on it. (Oh, blast the thing[the mike]). I want to put this one reservation on it and that is that any questions should be in writing, with names signed, so that we can read them into the mike and so that I can have clearly in mind what the questions are. 01:12 {2}

In the course of the last day and a half, I have gathered the impression that quite a number of people have been interested in the background on some of my stories; and, in some cases, in my social and political ideas, economic ideas, and so forth—some of which, but not all of which, shows in my stories; and, some of them have evidenced an interest in my own personal background. So, if the question comes along, I will do my best to answer it, perhaps dodging the embarrassing ones a little, but not too much. 01:52 {3}

Now to get you to the matter of the talk itself: THE DISCOVERY OF THE FUTURE. Olon (Wiggins, Convention Director) told me that there was no time limit placed on my remarks, so I assumed that he wanted my usual three hour speech. [laughter] Or, perhaps, we can just keep going here until the hall is cleared. Anyhow, Forry [Ackerman] told you that I have been reading science fiction for a long time. I have. I have been able to, I have been reading Science Fiction as long as I could get hold of it and I probably experienced the, much the same process that most of you did: of parental disapproval, of those funny looks you get from your friends and so forth and so on, over

the outlandish machines and animals on the covers. You leave one around loose in your home and a friend will pick it up. Those who are not fans ask you if you really read that stuff, and from then on they look at you with suspicion.

reading “that kind of junk.” Well, we here, the science fiction fans = we are the lunatic fringe! We are the crazy fools who read that kind of stuff; who read those magazines with those covers with the outlandish machines and the outlandish animals on it, and so forth. You leave one around loose in your home. Your friends will pick them up, those who are not fans, ask you if you *really* read that stuff, and from then on they look at you with suspicion. Apparently, we are not quite right in the head. 03:21 {4}

Why do we do it?

Well, here among friends I am quite willing to state frankly and with open conceit that we do so because we have more of that quality which distinguishes men from all other animals than do those around us. That quality is the power of time-binding. (That is a new term—hyphenated. Note it—you’re going to see it again in the next few years, many times.)

By time-binding I mean the ability to live mentally in the past and the future, especially, the future, as well as in the present.

Why do we do it? I think I know. This is an opinion, but it is probably why we like science fiction. It is not just for the adventure of the story itself—you can find that in other types of stories. To my mind it is because science fiction has as its strongest factor the single thing that separates the human race from other animals—I refer to a quality which has been termed “time-binding.” With a hyphen. It’s a term that may not have come to your attention. It is a technical term invented by Alfred Korzybski, and it refers to the fact that the human animal lives not only in the present, but also in the past and the future.

Why do we do it? I think I know. This is an opinion, but I think I know what it amounts to, why it is that we like science fiction primarily. It’s not just for the adventure or the story interest— that sort of thing, you can find that in other types of fiction. But, to my mind it is because science fiction has in it as its strongest factor the single thing that separates the human race from all other animals. In that I refer to a quality that’s been termed “time-binding.” Time-binding with a hyphen. It’s a term that may not have come to your attention. I know it has to some of you—technical term invented by Alfred Korzybski, and it refers to the fact that the human animal lives not only in the present but in the past and in the future. 04:21 {5}

It may have occurred to you that, although I stated that time-binding was the only thing that sets us apart from the other animals, reading and writing also sets us apart. True—but reading and writing are the primary techniques whereby we achieve time-binding; I include them under the term. Other differences between men and animals may occur to you—most of them will be found to have exceptions. For example, animals sometimes use and invent machines, they form governments, raise crops, domesticate other animals, and sometimes use money and other symbols. But time-bind they do not.

The human animal differs from all other animals *only* in this one respect. The definition includes both reading and writing. That is the primary technique whereby we are able to make records, to gather data and to look into the future. Other things we do that we think of as making us humans rather than animals—some animals have done at some time. They form governments. They invent machines. Some animals even use money. I have not seen them doing it, but I have heard reports that I believe to be credible. But time-bind they do not do, to anything like the extent that the human race does.

In connection with the statement that the human animal differs from all other animals *only* in this one respect. I realize that reading and writing are things that other animals do not do, but, but reading and writing are aspects of time-binding. The definition includes reading and writing. That is the primary technique whereby we are able to make records, to gather data and to look into the future. The other things that we do that we think of as making us humans rather than animals—most animals—I should not say that—some animals at some time have done. They form governments. They invent machines. Some animals even use money. I have not seen one do it, but I have heard reports that I believe to be credible. But time-bind they do not, to anything like the extent that the human race does. 05:26 {6}

The operation of time-binding consists of using the multitudinous records of the past to predict the future. In its simplest form it consists of packing a lunchpail against the noon hour, taking a rain coat because the forecast reads “unsettled”. It is crop rotation, life insurance, the making of wills, railroad timetables, debentures, defense projects, vaccination.

Time-binding consists of making use of the multitudinous records of the past that we have. On the basis of those records, the data we have collected directly and the data that we get from others by means of time-binding techniques, including reading and writing, we are able to plan our future conduct. It means that we have lived mentally in the past and in the future, as well as in the present. That is certainly true of science fiction fans.

The operation of time-binding consists of making use of the multitudinous records that we have of the past, and on the basis of those records, on the basis of the data that we have collected directly and the data that we get from others by means of our time-binding techniques, including reading and writing, sound movies, this gadget that’s causing me a certain amount of nervousness here on my left..by means of those techniques, figuring out something about the way the universe works and making predictions on which we can plan our future conduct. And it means that we have lived mentally in the past and in the future, as well as in the present. And that is certainly true with science fiction fans. 06:14 {7}

I like the term Future Fiction that Charlie Hornig gave it. It seems to me a little broader than Science Fiction because most of these stories are concerned with the future—what will happen.

I like the term Future Fiction that Charlie Hornig gave to it. It seems to me a little bit broader than Science Fiction because most of these stories are concerned with the future—what may happen. 06:30 {8}

It is taking the future into account, trying to predict what it will be, and making your plans accordingly. The childlike person lives from day to day, the adult tries to plan for a year or two at least, the statesman does his best to form policies and lay out programs that will serve for twenty years or so, some farsighted institutions like the Catholic Church and the Smithsonian Institution lay plans that will not culminate for a century or more.

In taking the future into account, trying to predict what it will be, and trying to make your plans accordingly, you are time-binding. The child-like person lives from day to day. The adult tries to plan for a year or two at least. Statesmen try to plan for perhaps twenty years or more. There are a few institutions which plan for longer than the lives of men, as for example, the Smithsonian Institution and the Catholic Church, that think not in terms of lifetimes, but in centuries. They make their plans that far ahead, and to some extent, make them work out.

In taking the future into account, trying to predict what it will be, and trying to make your plans accordingly; you are time-binding. The child-like person lives from day to day. The adult tries to plan for a year or two at least. Statesmen try to plan for oh, maybe twenty years, something like that. There are a few institutions, longer than the lives of men, as, for example, the Smithsonian Institution and the Catholic Church, to give a spread to the examples, who think not in terms of lifetimes, but in centuries. They make their plans that far ahead, and to some extent, make them work out. 07:11 {9}

But we science-fictionists look forward in terms of racial magnitude—centuries, even thousands of years. True—our dreams are frequently utterly wide of the mark; we lack data and do not know how to use the data we have any too well—but, by Joe, we try! we know there is going to be a future and we know that it is going to be different from the present, as the present is different from the past.

Science fiction fans differ from most of the rest of the race by thinking in terms of racial magnitudes—not even centuries, thousands of years. Stapledon thinks in terms of . . . how many years? How far does his time scale go? I don’t know: the figures mean nothing to me. That is what science fiction consists of—trying to figure out from the past and from the present what the future may be. In that we are behaving like human beings.

Science fiction fans differ from most of the rest of the race by thinking in terms of racial magnitudes—not even centuries, thousands of years. The Stapledon to whom I was flatteringly compared, thinks in terms of...how many years? How far does his time scale go? I don’t know: the figures mean nothing to me. That’s what science fiction consists of—in trying to figure out from the past and from the present what the future may be. And in that we are behaving like human beings. 07:53 {10}

We try to envision it—in that lies our principle virtue. In that respect we are

more nearly human than those who laugh at our interests.

As I pointed out, all sane human beings time-bind to some extent. Usually their time-binding is limited to their own affairs. But, although they observe and plan for changes in their own immediate personal affairs, they rarely—very rarely—conceive of any drastic change in the culture they inhabit.

Now, all human beings time-bind to some extent when they try to discover the future. But most human beings—those who laugh at us for reading science fiction—time-bind, make their plans, make their predictions, only within the limits of their personal affairs. In that respect, they may try to predict for a year or two, make plans, even try to predict for their entire lifetimes, but they rarely try to predict in terms of the culture in which they live. In fact, most people, as compared with science fiction fans, have no conception whatsoever of the fact that the culture they live in does change, that it *can* change. Even though they may believe it with the top of their minds, they don't believe it way back in the thalamus, in their emotions.

Now, all human beings time-bind to some extent. They try to discover the future. But most human beings and those who laugh at us for reading science fiction—time-bind, make their plans, make their predictions, only within the limits of their immediate personal affairs. In those respects, they may try to predict for a year or two, make plans, even try to predict for their entire lifetimes; but they rarely try to predict in terms of the culture in which they live. In fact, most people, as compared with science fiction fans, have no conception whatsoever of the fact that the culture they live in *does* change, that it *can* change. Even though they may believe it with the top of their minds, they don't believe it way back down here in the thalamus, back in their emotions. They don't really believe it. 08:45 {11}

Our grandfathers were certain that the auto would never replace the horse, our fathers were sure that airplanes weren't practical.

Our grandfathers thought the horse could never be replaced by the auto. Four years after the Wright brothers first flew, they were still trying to get the War Department to come out to look at the airplane. And when one Major General did take a look at an airplane flying, he remarked that it was a very interesting scientific toy, but, of course, it had no possible military application! That was just a short time ago, a very short time.

Our grandfathers thought that the horse could never be replaced by the auto. Four years after the Wright brothers first flew, they were still trying to get the War Department just to come out and take a look at the thing. And when one Major General did take a look at an airplane flying, he remarked that it was a very interesting scientific toy, but, of course, it had no possible practical military application! And that was just a short time ago, a very short time ago. 09:17 {12}

People everywhere are almost always sure that the “customs of their tribe are the laws of nature”....

You will hear that sort of thing around you all the time. I made use, a while ago, of a quotation I would like to use again, from G. B. Shaw. Referring to Britannicus in *Caesar and Cleopatra*, he said, “he is an outlander and a barbarian and he believes that the customs of his tribe are the laws of nature.” That is what you are up against when you try to get most people to read science fiction. That is why they think you are crazy, because they believe that the customs of their tribe are the laws of nature, immutable and unchanging. They do not believe in changes.

That's still happening. You will hear that sort of thing around you all the time. I made use, a while ago, of a term, of a quotation I would like to use again in that connection, from G. B. Shaw. Referring to Britannicus in *Caesar and Cleopatra*, he said, something to the effect that “he is an outlander and a barbarian and he believes that the customs of his tribe are the laws of nature.” And that's the sort of thing that you run up against when you try to get most people to read science fiction. And that's why they think you are crazy, because they believe that the customs of their tribe are the laws of nature, immutable and unchanging. They do not believe in change. 10:04 {13}

”There’ll always be an England.

But, there *won’t* always be an England, and you and I know it, Nor Germany[hand written note on typescript]. Nor a United States...Nor a Baptist Church....Nor an American Legion...Nor a Democratic party....Nor monogamy...Nor the modesty taboo...Nor the superiority of the white race....Nor airplanes...nor automobiles ...nor any custom, technique, institution, belief, or social structure that we see around us today. All of them will change, all of them will be replaced with the new and the strange, many of them in our own lifetime.

Phrases like “There’ll always be an England” are pleasant and inspiring at the present time, but we know better. There won’t always be an England, nor a Germany, nor a United States, a Baptist Church, nor monogamy, nor the Democratic Party, nor the modesty taboo, nor the superiority of the white race, nor airplanes. Nor automobiles. They will go. They will be gone—we’ll see them go. Any custom, institution, belief, or social structure that we see around us today will change, will pass, and most of those we will *see* change and pass.

In science fiction, we try to envision what those changes might be. Our guesses are usually wrong; they are almost certain to be wrong. Some men, with a greater grasp on data than others, can do remarkably well. H. G. Wells, who probably knows more (on the order of ten times as much, or perhaps higher) than most science fiction writers, has been remarkably successful in some of his predictions. Most of us aren’t that lucky. I do not expect my so-called *History of the Future* to come to pass. I think some of the trends in it may show up, but I do not think that my factual predictions as such are going to come to pass, even in their broad outlines.

You speak of these things to the ordinary man, the sort who regards science-fiction as a fantastic waste of time, and he will concede it with the

You speak of this sort of thing to an ordinary man—tell him that things are going to change—he will admit it, but he does not believe it at all. He

Phrases like “There’ll always be an England”, it’s a pleasant phrase and inspiring one at the present time, but we know better. There won’t always be an England—nor a Germany, nor a United States, nor a Baptist Church, nor monogamy, nor the Democratic Party, nor the modesty taboo, nor the superiority of the white race, nor airplanes—they’ll go — nor—automobiles —they’ll be gone, we’ll see them go. Any custom, technique, institution, belief, or social structure that we see around us today will change, will pass, and most of them we will *see* change and pass. 10:52 {14}

In science fiction, we try to envision what those changes might be. Our guesses are usually wrong, they are almost certain to be wrong. Some man, with a greater grasp on data than others, can do remarkably well at it. H. G. Wells, who knows probably of the data that makes up the world, oh, on the order of ten times as much, or perhaps higher than that, than most science fiction writers or the best of the science fiction writers, has been remarkably successful in some of his predictions. Most of us—we aren’t that lucky. I don’t expect my so-called *History of the Future* to come to pass, not in anything like those terms. I think some of the trends in it may show up; but I don’t think that my fictional predictions as such are going to come to pass, even in their broad outlines. 11:46 {15}

(Somebody put a glass of water around here. I’ve got to find it now. I’m drying up. Do you suppose it could be the altitude Olon?) 11:54 {16}

[break] I was hoping that hadn’t started. I wanted to make a little aside to the effect that Mrs. Heinlein and I are in almost complete collaboration on everything. She never signs any of the stories, but I do better if she’s there. 12:16 {17}

Ah, now where were we? —You speak of these sort of things to an ordinary man, tell him that things are going to change; he’ll admit it—oh yes, he’ll

top of his brain, but does not believe it, not emotionally, deep down inside. Hell's Bells! His father never believed that changes would come and neither does he. In fact he is hardly equipped to recognize change when it does come—for in two weeks he can forget that it was ever any different from now. He believes in “progress”—to the extent that he thinks the Brave New World will be a little bit bigger, busier, louder, brighter—with more neon signs. That's all. He does not believe in any actual change in the basic nature of our culture nor the technology. Oh no! Airplanes are all right, but those crazy rocket ships—they can't work. Nothing for them to push on.

In 1910 he did not believe in airplanes.

I have spoken of mechanical changes because they are easier to see, to define than the more subtle social and psychological changes. Such changes are even harder to believe in, to imagine, than technological changes. Twenty years ago no respectable person dared use the word “syphilis” in public, no paper dared print it. A small change? The deuce it is—it is indicative of a whole maze of sweeping social changes. But the thing I want to emphasize is this: our grandfathers would not have believed the change possible. Certain things were decent; certain things were indecent—always had been, always would be.

believes it just with the top of his mind. He believes in “progress.” He thinks things will get a little bit bigger, and louder, and brighter, a few more neon signs. *But he does not believe that any actual change in the basic nature of the culture in which he lives, or its technology, will take place.* Airplanes he thinks are all right, but those crazy rocket ship things! Why, a rocket ship couldn't possibly fly. It hasn't got anything to PUSH on. That is the way he feels about it. There will never be any rocket ships. That is all right for Buck Rogers in the funny papers. He does not believe that there could be rocket ships, nor does he believe that there will be things that will make rockets look like primitive gadgets that even the wildest of the science fiction writers have not been able to guess or think about. Rocket ships are about as far as I am willing to go because I have not got data enough to think about, to make a reasonable guess about the other forms of transportation or gadgets we may have. But that same man did not believe in airplanes in 1910!

I have spoken primarily of mechanical changes because they are much easier to show, to point to, than the more subtle sociological changes, cultural changes, changes in our customs. Some of these can be pointed out. I would like to point out one of them right now. The word “syphilis” could not be used in public even as short a time as fifteen years ago. Yet, as I used it here, I did not see any shock around the room—nobody minded it—even the *Ladies' Home Journal* runs articles on it. We are getting a little more civilized in that respect than we were twenty years ago. Our grandfathers considered that word indecent. They believed that things that were decent and indecent were subject to absolute rules, that they were laws of nature. The majority of people around us now believe that their criteria of decency and indecency are absolute, that they won't change, that there are

admit it, but he doesn't believe it. He doesn't believe it at all, it's just with the top of his mind. He believes in “progress.” Quotation marks on that. He believes in “progress”. He thinks things will get a little busier and bigger, and louder, and brighter, and a few more neon signs. That's standard. That's orthodox doctrine; he believes in that, *but he does not believe that any actual change in the basic nature of the culture in which he lives, or its technology, will take place.* Oh no! Airplanes he thinks are all right, but those crazy rocket ship things—! Why, a rocket ship couldn't possibly fly—it hasn't got anything to push on. That's the way he feels about it. There will never be rocket ships. That's all right for Buck Rogers in the funny papers. But he doesn't believe that there could be rocket ships, nor does he believe that there could be things that will make rocket ships look like primitive gadgets that even the wildest of the science fiction writers haven't been able to guess or think about. Rocket ships are as about as far as I am willing to go because I haven't got data enough to think about, to make a reasonable guess at the other forms of transportation or gadgets that we may have. But this same man didn't believe in airplanes in 1910! 13:48 {18}

I have spoken primarily of mechanical changes because they are much easier to show, to point to, than the more subtle sociological changes, cultural changes, changes in our customs, things of that sort. Some of those can be pointed out. I would like to point out one right now. The word “syphilis” couldn't be used in public even as short a time as fifteen years ago. Yet, as I used it here now, I didn't see any shock around the room; nobody minded it; even the *Ladies' Home Journal* runs articles on it. We're getting a little more civilized in that respect than we were twenty years ago. Our grandfathers considered that word indecent, and they believed that the things that were decent and the things that were indecent were subject to absolute rules, that they were laws of nature; and the majority of the people around us now believe that their

some things that are *right* and some things that are *wrong*. They do not know enough about past history to be able to make any predictions about the future.

I could think of a very rude word to use in that connection—and I venture to speculate that ten years from now the customs may permit the word to be used from a public platform. Unthinkable—Things change—even our most cherished taboos.

In these days of sudden and drastic change it is extremely important that a man be prepared for it and relaxed in the face of it—if he is too[sic] retain his sanity. I mean that quite seriously.

I could think of some rude words to use in that connection, words that are still rude now. I think it quite possible that twenty years from now on this same platform I could use those words and not produce any shock around the room. For things *do* change. And words which we consider utterly indecent today may very possibly simply be used as tags, as terms with no emotional connotation to them, twenty years from now.

We happen to live in a period of sudden and drastic change in a good many of the things that happen to us. I think it is extremely important that we be prepared for that change and for that reason, I think that science fiction fans are better prepared to face the future than the ordinary run of people around them, because they believe in change.

To that extent, I think that science fiction, even the corniest of it, even the most outlandish of it, no matter how badly it's written, has a distinct therapeutic value because *all* of it has as its primary postulate that the world *does* change. I cannot overemphasize the importance of that idea. Unless you believe that, unless you are prepared for it—as I know all of you are—you can't retain your sanity these days. When a man makes predictions and they keep failing to come true, time and again, he goes insane, functionally insane. It has been proved in laboratories time and again. It has been

criteria of decency and indecency are absolutes, that they won't change, that there are some things that are *right* and some things that are *wrong*. They don't know enough about past history in that respect to be able to make any predictions about the future. 15:03 {19}

I could think of some rude words to use in that connection. Words that are still rude now, and I think it quite possible that twenty years from now from this same platform I could use those words and not produce any shock around the room. For things *do* change. And words which we consider utterly indecent at the present time may very possibly simply be used as tags, as terms with no emotional connotation to them, twenty years from now. 15:30 {20}

But, we happen to live in a period of sudden and drastic change in a good many of the things that happen to us. And I think it is extremely important that we be prepared for that change, and for that reason, I think that science fiction fans are better prepared to face the future than the ordinary run of people around them, because they believe in change. 16:04 {21}

(I'll be getting a frozen face on that one. That went on the platter too—someone just took a picture of me...for the benefit of those who otherwise would not understand that remark. [break] Where were we again? I get off the track - I've got a one-track mind and I slip a gear every now and then...) 16:27 {22}

To that extent, I think that science fiction, even the corniest of it, even the most outlandish of it, no matter how badly it's written, has a distinct therapeutic value because *all* of it has as its primary postulate that the world *does* change, and I cannot overemphasize the importance of that idea in these days. Unless you believe in that, unless you are prepared for it—as I know all of you are—you can't retain your sanity these days, it's an impossibility. When a man makes predictions and they keep failing to come out, time and time again, things don't come out the way he wants to, he

proved with respect to men, but I'll give an illustration with respect to animals. The well-known experiment was performed with rats, an experiment in which a rat was disappointed in his predictions time and again. He went crazy. It happens to work the same way with men. Things do not necessarily work the same way with animals as they do with men but in this case, there is data to prove it. The inability to believe in change makes absolutely certain that your prediction will disappoint you. That does not apply to this group, but it does apply to a great many people.

We are entering, we are already part way into a period of racial insanity, mass psychoses, hysterias, manic depressions, paranoias, all of them stemming directly from the inability of most men to predict change and to accept it without shock and with a relaxed and serene mind when it comes. Came the market crash and speculators jumped out of the windows—from an inability to foresee the obvious and to prepare for it.

Came the depression, and the madhouses filled up, while only slightly less slaphappy individuals concocted the most amazingly unscientific schemes for all of us to get rich by playing musical chairs—and attracted millions of followers.

Poor Mr. Hoover did not stand a chance—he, too, was unable to predict change, nor to adjust himself to it when it came.

Hitler and war, we acquired a new popular hysteria—war jitters—again based on the the inability to foresee change and to prepare for it. Let me make one point quite plain: This war is a bad thing, yes, a very bad thing—but simply as a matter of death and destruction it is a teaparty compared with periods the human race has lived through—even as late as 1914-18 (If

For that reason, I believe we are in a period in which large portions of the human race will be in a condition of, if not insanity, at least un-sanity. We see that over a large portion of the world today. I think we have seen it crawling up on us for a number of years. In 1929 we had the market crash and people jumped out of the window as a result of not being able to predict things which were perfectly obvious, written on the face of the culture, something that would happen.

The Depression came along, and the madhouses filled up again. Other only slightly less slaphappy individuals proceeded to be a bit insane by concocting the most wildly unscientific schemes for making everybody rich by playing musical chairs. Not quite crazy—they could still find their way around and take street cars and not get lost, but not quite sane either. That can lead, if it goes on long enough, to a condition of mass insanity that none of us is going to like.

goes insane, functionally insane—it's been proved in the laboratories time and again. It's been proved with respect to men, but I'll give an illustration with respect to animals...the well-known experiment, performed with rats, in which a rat was disappointed in his predictions time and again, and he went crazy. It happens to work the same way with men. Things do not necessarily work the same way with animals the way they do with men but in this case, there is data to prove it, and the inability to believe in change makes absolutely certain that your predictions will disappoint you. That does not apply to this group, but it does apply to a great many people. 17:49 {23}

For that reason, I believe that we are now in; we're now entering into and are already part way in to a period in which large portions of the human race will be in a condition of, if not *insanity*, at least *un-sanity*. I think we see that over a large portion of the world today, that we see it in the United States today. I think we have seen it crawling up on us for a number of years. In 1919[sic] we had the market crash and people jumped out of the window from not being able to predict things that were perfectly obvious, written on the face of the culture, something that would happen. 18:28 {24}

And the Depression came along, and the madhouses filled up again, and, other only slightly less slaphappy individuals proceeded to be a little bit insane by concocting the most *wildly* unscientific schemes for making everybody rich by playing musical chairs, that sort of thing. Not quite crazy—they could still find their way around and take street cars and not get lost; but not quite sane either. And that sort of thing *can* lead, if it goes on enough, to a condition of mass insanity that none of us are going to like. 19:11 {25}

you don't believe that, check the figures.)—and will live through.

Nevertheless, we science fictionists, I think, are better prepared for it than others. During a period of racial insanity, mass psychoses, hysteria, manic depression, paranoia, it is possible for a man who believes in change to hold on, to arrest his judgment, to go slow, to take a look at the facts, and not be badly hurt. Things will probably happen to us, very unpleasant indeed, we can't separate ourselves from the matrix in which we find ourselves. Nevertheless, WE stand a chance, for I am very much afraid that a great many people of the type who laugh at us for dealing with this stuff, will not be able to hang on.

The important thing is to preserve your sanity while it is going on. This series of wars may last five years, ten years, twenty years, fifty years. If we realize that and are prepared for it, we can calm down, even be reasonably happy in the face of it. From this point of view, science-fiction, the literature of change and the future, far from being escape literature, is literature of great therapeutic value. A man who has roamed the spaceways with Kimball Kinnison can't be panicked out of his senses by parachute troops. I am very serious about this. Whatever the future holds for us, it is going to be very different from what we are used to—probably much wilder than the wildest yarn a commercial editor will accept. But it can do very little harm—at least it will do us minimum harm—if we are emotionally braced by the knowledge that change will come.

The important thing is to hang on to your sanity, to preserve sanity while it happens—no matter what bad things happen to the world. As individuals it may be difficult for us to do anything about it, even though all of us in our own ways, and according to our lights, are trying. But this series of wars that we find the world in now may go on for another five years, ten years, twenty years—it may go on for fifty years—you and I may not live to see the end of it. I, personally, have hopes—wishful thinking—that it will terminate quickly enough so that I can pass the rest of my lifetime in comparative peace and comfort. But I'm not optimistic about it. During such a period, it is really difficult to keep a grip on yourself, but I think that we are better prepared to than some of the others.

I can speak more freely here than I could in a political meeting, because it's a highly selected group. I've known a good many science fiction fans, and I've observed, statistically, certain things about them. Most of them are young as compared with other groups, most of them are extremely precocious—quite brilliant. I'd be very much interested to see IQs run on a

Nevertheless, we science fictionists, I think, are better prepared for it than others. During a period of racial insanity, mass psychoses, hysteria, manic depressions, paranoias, that sort of thing, it is possible for a man who believes in change to hold on to his sanity, to arrest his judgment...to go slow...to take a look at the facts, and not be badly hurt. Oh, things probably will happen to us, very unpleasant indeed—we can't separate ourselves from the matrix in which we find ourselves; But, nevertheless, we stand a chance, for I am very much afraid—and I speak quite seriously in this—I am very much afraid that a great many people of the type who laugh at us for dealing with this stuff, will not be able to hang on to their sanity. 20:06 {26}

The important thing about it is to hang on to your sanity, to preserve your sanity while it happens, no matter what bad things may happen to the world. As individuals it may be difficult for us to do anything about it, even though all of us in our own way and according to our own lights, are trying to do something about it. But this series of wars that we find the world in now may go on for another five years, ten years, it may go twenty years—it may go fifty years—you and I may not live to see the end of it. I, personally, have hopes—wishful thinking—I have hopes that it will terminate quickly enough so that I can pass the rest of my lifetime in comparative peace and comfort. But I'm not optimistic about it. And during such a period, it is really a difficult thing to keep a grip on yourself; but I think that we are better prepared to do it than some of the others. 21:01 {27}

I can speak more freely here than I could in, for example, in a political meeting, because it's a highly selected group. I've known quite a lot of science fiction fans, and I've observed, statistically, certain things about them. Most of them are young as compared with other groups, most of them are extremely precocious—quite brilliant—I'd be very much interested

typical group of fans. But, even without IQs I know that most of the people here are way above average in intelligence. I've had enough data on it to know. I'm not trying to flatter you, I'm not interested in that. I *am* interested in the fact that you have unusually keen minds. However, that lays us open, and I am including myself in this, lays us open to dangers that don't hit the phlegmatic, the more stolid. Unless we are able to predict, we are even more likely to be subjected to functional insanities than those around us.

I am preaching now—I am seriously and earnestly giving advice that I believe will be helpful in living through a difficult period in history.

I'm preaching, sure. I know that. I could have filled a speech with wisecracks and with stories and anecdotes, but I feel very deeply about this. And if you can bear with me for a few minutes more, I still want to talk about it.

There's a way out, there's something that we can do to protect ourselves, something that would protect the rest of the human race from the sort of things that are happening to them, and are going to happen to them. It's very simple, and it's right down our alley: the use of the *scientific method*.

I'm not talking about the scientific method used in the laboratory. The scientific method can be used to protect ourselves from serious difficulties of other sorts—getting our teeth smashed in—in our everyday life, twenty-four hours of the day.

I should say what I mean by the scientific method. Since I have to define it in terms of words, I can't be as clear as I might be if I were able to make an extensional definition. But I mean a comparatively simple thing by the scientific method: the ability to look at what goes on around you. Listen to what you hear, observe, note facts, delay your judgment, and make your own predictions. That's all there is, really, to the scientific method: to be

to see IQs run on a typical group of fans. But, even without running IQs, I know that—I know that most of the people in here are *way* above the average in intelligence. I've had enough data on it to know. I'm not trying to flatter you, I'm not interested in it. I *am* interested in the fact that you have unusually keen minds. However, that very fact lays us open—and I included myself in it—lays us open to dangers that don't hit the more phlegmatic, the more stolid. We, unless we are able to predict, unless we are able to observe the data; are even more likely to be subjected to functional insanities than those around us. 22:26 {28}

I'm preaching—sure; I know that. I could have filled up a speech with wisecracks and with stories and anecdotes, but I feel very deeply serious about this. I mean it. And if you can bear with me for a few minutes along this line, I still want to talk about it. 22:51 {29}

There's a way out, there's a way out, there's something that we can do to protect ourselves, something that would protect the rest of the human race from the sort of things that *are* happening to them, and are *going* to happen to them. It's very simple, and it's right down our alley: the use of the *scientific method*. 23:09 {30}

I'm not talking about the scientific method in the laboratory. The scientific method can be used to protect our sanity, to protect ourselves from serious difficulties of other sorts—getting our teeth smashed in, and things like that—in our everyday life, twenty-four hours of the day. 23:29 {31}

I should say what I mean by the scientific method. Since I have to make the definition in terms of words, I can't be as clear as I otherwise might be if I were able to make an extensional definition on it. But I mean a comparatively simple thing by the scientific method: the ability to look at what goes on around you...listen to what you hear...observe...note facts, suspend your judgment...and make your own predictions. That's all, really

able to distinguish facts from non-facts.

all there is, to the scientific method: to be able to distinguish facts from non-facts. 24:16 {32}

(I'm going to start to light a cigarette.[break] look down and see if my wife approves. I'm not henpecked. I'm very well taken care of.) 24:27 {33}

[Editor's note: several paragraphs occur in the original manuscript out-of-sequence with both of the transcribed texts and are inserted here to match those texts. This is the first such text]

But what is a fact?

A fact is something that has already happened—before this moment on July 4<sup>th</sup>, 1941. What you think will happen tomorrow is not a fact, it is a prediction.... And predictions may be wrong.

I used the term “fact.” I used it in a technical sense, and should say what I mean by a fact. A fact is anything that has happened before this moment, on July 4<sup>th</sup>, 1941. Anything that has already happened before this moment. Anything after this moment is a non-fact. Most people can't distinguish between them. They regard as a *fact*, that they're going to get up and have breakfast tomorrow morning. They get the difference between facts and non-facts completely mixed up, and in particular, these days people are getting very mixed up between facts and theories, isms, ologies and so forth, so-called “laws of nature,” depending on what year you happen to be speaking.

I used the term “fact.” I used it in a technical sense, and I should say what I mean by a fact. A fact is anything that has happened before this moment, on July 4<sup>th</sup>, 1941. Anything that has already happened before this moment. Anything after this moment is a non-fact. Most people can't distinguish between that. They regard as a *fact*, that they're going to get up and have breakfast tomorrow morning. They get the difference between facts and non-facts completely mixed up, and in particular, these days, people are getting very mixed up between facts and theories, -isms, --ologies so forth and so on, so-called “laws of nature,” depending on what year you happen to be speaking. 25:27 {34}

I am reminded of a pseudo-scientific economic and political movement which at one time or another has caught the fancy of numerous fans. The principle claims of this movement include the allegation that ~~they are~~ it is “strictly scientific” and “deals in nothing but facts”. A good large percentage of the “facts” they claim to deal in are things that are going to happen, so they say, some time in the future. I might add, in xxxxxx that their textbooks and pamphlets are filled with some of the most unscientific balderdash in the fields of science with which I am myself expert. I won't attempt to pass judgments on the parts that lie outside my fields, but I will say that I have attempted to find one man of scientific attainments in this movement. So far I have not been successful.

That distinction between fact and fiction, fact and non-fact, is of extreme importance to us now. It has even become a strong issue in the field of science fiction. Without referring to any movement by name, or any person by name, because I wish to make an illustration, I want to invite your attention to the fact that the science fiction field has been very much stirred up by a semi-political movement which uses the word “fact” quite extensively. But it uses the word fact with reference to what they are—what they *predict* will happen in the future, and that's a non-fact. And any movement, institution, any theory, which does not make a clear and decided distinction between fact and non-fact, cannot by any stretch of the imagination be called a scientific movement. It simply is not because it does not use the scientific method. No matter how complicated their terminology may be, or how much they may use the *argot* of science.

That distinction between fact and fiction, fact and non-fact, is of extreme importance to us now. It even has become a strong issue in the field of science fiction. Without referring to any movement by name, or any person by name, simply because I wish to make an illustration—this is an illustrative point and has no personal...nothing personal with respect to anyone—I want to invite your attention to the fact that the science fiction field has been very much stirred up by a semi-political movement which uses the word “fact” quite extensively. But it uses the word fact with reference to what they're—what they *predict* will happen in the future, and that's a non-fact. And any movement, institution, any theory, which does not make a clear and decided distinction between fact and non-fact, *can not* by any stretch of the imagination be called a scientific movement. It simply is not because it does not use the scientific method. No matter how complicated their terminology may be, (I won't be long). And no matter how complicated their

But the point I wanted to make is this: a group which is unable to distinguish between a fact that has happened and a prediction that they believe will happen has no more right to claim the label of “scientific” than a crystal gazer—no matter how impressive their

pseudoscientific doubletalk, nor how neat their charts and blueprints. Facts you must have; predictions you must make—oh yes! to live twentyfour hours, you must make predictions—but don't get the two mixed up.

[End of first section of out-of-sequence text]

I'm going to have to make an excursion here. I've wandered somewhat from the talk I had in mind.

I want to make another comment on science fiction and the fact that you and I have to put up with an awful lot of guff from people because of the orthodox point of view with which it is regarded.

I have never been able to understand quite why it is that the historical novel is the most approved, the most sacred form of literature. The contemporary novel is next so; but the historical novel, if you write an historical novel, that's *literature*.

All of us here read science-fiction and love the stuff—even though a lot of it is tripe. although from my point of view the corniest science-fiction yarn, if it contains an honest effort to predict a future probability, is a more worthwhile effort than all the “Gone With The Wind”s and “Anthony Adverse”s ever published. It is a convention of our literary culture that the historical novel is the most respectable form of fiction, whereas a fantasy of the future is probably junk.

I don't despise the historical novel—from a strictly utilitarian viewpoint, to say the least, it is necessary to survey the past in order to predict the future—but it seems to me that our literary critics, our professors of English, somewhat resemble the Fillyloo bird, who flew backwards, because, while he did not care where he was going, he likes to see where he has been.

I think that the corniest tripe published in a science fiction magazine (and some of it isn't too hot, we know that; some of my stuff isn't so hot) beats all of the *Anthony Adverses* and *Gone With the Winds* that were ever published, because at least it does include that one distinctly human-like attempt to predict the future.

One would think that the literary critics and the professors of English—those who make a business of deciding what is good and what is bad in literature—had some connection in their ancestry with the Fillyloo Bird. I think you know the Fillyloo Bird: he flew backwards because he didn't care where he was going, but he liked to see where he had been.

terminology may be or how much they may use the *argot* of science. 27:19 {35}

There's some, I'm going to have to make an excursion here...I've wandered quite a bit from the talk that I had in mind making. 27:29 {36}

I want to make another comment on the matter of science fiction and the fact that you and I have to put up with an awful lot of guff because, people, because of the orthodox point of view with which it is regarded. 27:47 {37}

I have never been able to understand quite why it is that the historical novel is the most approved, the most, oh, what's the word, give me a word quick—yes, the most sacred (word supplied by Mrs. Heinlein from floor)—of forms of literature. The contemporary novel is next so; but the historical novel, if you write an historical novel, that's, oh, that's *literature*. 28:15 {38}

I think the corniest tripe published in a science fiction magazine (and some of it isn't too hot, we know that; some of my stuff isn't so hot) beats all the *Anthony Adverses* and *Gone With the Winds* that were ever published, because at least it does include in it that one distinctly human-like attempt to predict the future. 28:42 {39}

One would think in the attitude on that subject that the literary critics and the professors of English, and so forth; those who make a business of deciding what is good and what is bad in literature; had some connection in their ancestry with the Fillyloo Bird. I think you know the Fillyloo Bird: he flew backwards because he didn't care where he was going, but he liked to see where he had been... 29:11 {40}

I've wandered a bit there. Back to my subject—all of us who read this stuff have a strong interest in and respect for science. Science won't save us—but the scientific method can. I am urging you consciously to apply the scientific method to your everyday life...to all of your everyday life. If you do, it will save your sanity even if the world goes crazy around you.

What is the scientific method?

It's a very simple thing, really, so simple that even many professional scientists forget to use it. It consists in this and this alone; In observing facts and accepting them, without prejudice or dogmatism. It consists in basing your predictions on facts, not theories. Then, when your predictions fail to come true, as they will many times, you accept the new facts without rancor nor emotional upset, chuck away the hypothesis you had formed, form a new one based on all the facts at your disposal, and try to do a better job of predicting the next time. If you are consistent about it and quite willing to slough off your old opinions as fast as you find them to be wrong, your predictions will grow more and more accurate. Such is the method of experimental science—the scientific method. [First out-of-sequence text originally appeared at this point]

But how does the scientific method apply to everyday life? How can you haul it out of the laboratory to use it to preserve your own sanity?

I want to mention the fashion in which the scientific method—just the matter of observing what goes on around you—observing it through your own eyes, instead of taking other people's opinions, reserving your judgments until you have enough data on which to make a judgment—can be of real use to you even now, quite aside from any possible worse period in history, in the coming history.

I mentioned that it can keep your teeth from getting knocked in; that's an important point. It can because you'll stay out of controversies and out of arguments that you would otherwise get into. If you are talking with a man who obviously does not bother to use the scientific method, or does not know how to use the scientific method in his everyday life, you'll never get in an argument with him. You'll know there's no point in an argument with him, that you cannot possibly convince him. You can listen—and you'll get some new data from him—and you'll be better able to predict thereafter, if on no other point than the fact that you'll be better able to predict what his reactions will be.

I'm going to cut this short now. I hope that we will come to a question period. I'd much rather deal with that than with this comparatively formal business. I do want to mention, however, the fashion in which the scientific method—just the matter of observing what goes on around you—observing it through your own eyes, instead of taking other people's opinions, reserving your judgments until you have enough data on which to make a judgment—can be of real use to you even now, quite aside from any possible worse period in the history...in coming history. 29:59 {41}

I mentioned that it can keep your teeth from getting knocked in; that's an important point. It can because you'll stay out of controversies and out of arguments that you would otherwise get into. If you are talking with a man who obviously does not bother to use the scientific method, or does not *know* how to use the scientific method in his everyday life, you'll never get into an argument with him—you'll know better, you'll know that there's no point in an argument with him, that you cannot possibly convince him. You can listen—and you'll get some new data from him—and you'll be better able to predict thereafter, if on no other point than the fact that you'll be better able to predict what his reactions will be. 30:46 {42}

Well, here is how it applies: For example, a man who uses the scientific method can not be anti-Semitic. Why not? Because, since he does not know all Jews, he realizes that he does not have all the facts on which to base a generalization. Possibly, he may hate *some* Jews—Jews whom he has known—but the scientific method requires him to treat each new Jew as a new fact, to be observed and evaluated without prejudice. Since he can never know more than a tiny percentage of all Jews, he can never be anti-Semitic.

There are other advantages, in the way of keeping yourself cooled down, so you can be a little happier. For example, a man who uses the scientific method cannot possibly be anti-Semitic. I have made that an illustration because it has caused a lot of trouble in the world lately. Why can't he be anti-Semitic? For a very simple reason: he doesn't have enough data, consequently he hasn't formed an opinion. No matter how long he lives he can't hate all Jews, and unless he knows all Jews, he can't hate all Jews, because he doesn't form an opinion unless he has data. It is possible for him to hate an individual Jew as it's possible for him to hate an individual Irishman or Rotarian or man or woman.

There are other advantages, in the way of keeping yourself cooled down, so you can be a little happier. For example, a man who uses the scientific method cannot possibly be anti-Semitic. I have made that an illustration because it has caused a lot of trouble in the world lately. Why can't he be anti-Semitic? A very simple reason: he doesn't have enough data, consequently he hasn't formed an opinion. No matter how long he lives he can't possibly know all Jews. Unless he knows all Jews, he can't *hate* all Jews, because he doesn't form an opinion unless he has data. It is possible for him to hate an individual Jew as it's possible for him to hate an individual Irishman or Rotarian or man or woman or so forth. Possible, not as likely as it is with other people, because a person using the scientific method deliberately delays his reactions. 31:50 {43}

But he can't possibly be anti-Semitic. He can't hate all capitalists, he can't hate all unions, he can't hate all women—you can't be a woman-hater, not if you use the scientific method. You can't possibly: you don't know all women. You don't even know a large enough percentage of the group to be able to form an opinion on what the whole group may be!

But he can't possibly be anti-Semitic. He can't hate all Capitalists, he can't hate all Unions, he can't hate all women—you can't be a woman-hater, not if you use the scientific method. You can't possibly: you don't know all women...you don't even know a large enough percentage of the group to be able to form an opinion [laughing] on what the whole group may be! 32:14 {44}

By the same reasoning, he can't hate capitalists—not all capitalists—nor all women—nor all unions. As a matter of fact, it is very difficult for him to hate at all, for the scientific method carries with it a cool withholding of final judgment which tends to restrain the more violent emotions.

By the same reasoning, it's very difficult for him to hate at all; and if you can just manage to keep hate out of your life (or a good portion of it—I can't keep it *all* out of my life myself. I've got to sit down and whip myself about the head and shoulders to get myself calmed down at times—but you can help yourself with this method)—if you can keep hate out of your life, you can keep from getting your teeth knocked in. You can keep out of a lot of difficulties and take care of yourself in a better fashion.

By the same reasoning, it's very difficult for him to hate at all; and if you can just manage to keep hate out of your life (or a goodly portion of it—I can't keep it all out of my life myself. I've got to sit down and whip myself about the head and shoulders to get myself calmed down at times)...but you can help yourself with this method, if you can keep hate out of your life, you can keep from getting your teeth knocked in. You can keep out of a lot of difficulties and take care of yourself in a better fashion. 32:50 {45}

He does not think that all politicians are crooks, nor that all mothers are saintly. He hardly ever holds an opinion that embraces the word "all". When he does, it is because he actually has data on all the members of the class in question—and even then his opinion

A man who uses the scientific method cannot possibly believe that all politicians are crooks, for he knows that one datum destroys the generalization. I'll give you one datum on that point: Senator George Norris, whether you like him or not, is a saint

A man with the scientific method cannot possibly believe that all politicians are crooks, for he knows that one datum destroys the generalization. I'll give you one datum on that point: Senator George Norris; whether you like him or not, the man is

is qualified by the knowledge that his observations or reports of observations may be in error.

Because he is never entirely certain of his own opinions, he does not jump into an argument with both feet at every opportunity. Which means that he avoids thereby many unnecessary emotional upsets and stands a much better chance of keeping all of his own teeth.

That is a rough picture of the scientific man in everyday life. Such a man stands a better chance of living through our present period to a ripe and happy old age.

To live by the scientific method requires no formal training in science whatsoever—it is an attitude, not a body of information.

However, I do not wish to disparage the acquiring of scientific information. On the contrary! You owe it to yourself to have at least a clear appreciation of the enormous wealth of scientific, historical, and sociological data available to a modern man. Without it you are bound to be severely handicapped in making your predictions in this giddy worlds[sic].

[Second section of out-of-sequence text originally here].

God knows that no one man can ever hope to cover even a small corner of the field of science nowadays.

[Second section of out-of-sequence text].

Many times I have heard people remark, “I wish I knew something about science, but I never went that far in school,” or, “It was too hard for me,” or something like that.

[end out-of-sequence text].

on earth. Whether you agree with his opinions or not, he’s not a bad man.

And because he’s never entirely certain of his own opinions on any subject, a man using the scientific method stays out of arguments, keeps himself from the emotional upsets that cause you to lose sleep and upset your stomach. You get such things as herpes—oh, I’m not an M.D., but there are plenty of functional disorders that a man can avoid, can very well avoid.

Here’s a rough picture of the scientific man in everyday life. Such a man stands a better chance of living through our period to a ripe and happy old age, in my opinion.

But I wish to make plain that the use of the scientific method does not depend on any formal education in science. It is an attitude and point of view and not a body of information. You need have no formal education at all to use the scientific method in your everyday life. I am not disparaging the body of scientific information that has been gathered by specialists or the equally enormous body of historical and sociological data that is available. Unfortunately, we can’t get very much of it. But you can still use the scientific method, whether you’ve had a lot of education or not, whether you’ve had time to gather a lot of personal data or not.

With respect to the acquisition of scientific training, I’ve heard people around fan clubs remark, “I wish I knew something about mathematics,” or “I wish I understood something about physics.” Complaints that they’re not fully appreciating some of the stories because they don’t have enough specialized information. Some subject was too hard, or they weren’t able to go far enough in school. I greatly

a saint on earth. Whether you agree with his opinions or not, he’s not...a bad man. 33:14 {46}

[laughter in the audience] This again is to the mike. That laugh had nothing to do with Senator Norris. That was a laugh at me. 33:28 {47}

And because he’s never entirely certain of his own opinions on any subject, a man using the scientific method stays out of arguments, keeps himself from the emotional upsets that cause you to lose sleep and upset your stomach and get you such things as herpes and — oh, I’m not an M.D., but there are plenty of functional disorders that a man can avoid, can very well avoid. 34:01 {48}

But that’s a rough picture of the scientific man in everyday life. Such a man stands a better chance of living through our period to a ripe and happy old age, in my opinion. 34:14 {49}

But I wish to make plain that the use of the scientific method does not depend on any formal education in science. It is an attitude and a point of view and not a body of information. You need have no formal education at all to be able to use the scientific method in your everyday life all the time. I am not disparaging the body of scientific information that has been gathered by specialists or the equally enormous body of historical and sociological data that is available. And all of us will be better able to make predictions, the more such data we have available. Unfortunately, we can’t get too much of it. But you can still use the scientific method, whether you’ve had a lot of education or not, whether you’ve had time enough to gather a lot of personal data or not. 35:10 {50}

But with respect to the acquisition of scientific training, I’ve heard people—oh, I’ve heard around fan clubs the remark that, “I wish I knew something about mathematics,” or “I wish I understood something about physics.” They...complaints that they’re not fully appreciating some of the stories because they don’t have enough specialized information. Or they’ve...some subject was too hard, or

sympathize with that. I'm not trying to play it down or anything of the sort. It's very much of a regret to me that I'm not at least twins and preferably triplets, so that I could have time to study the various things that I'm interested in. And I know that a lot of you have felt the same way—that life is just too—not too short, but too narrow—we don't have room enough, time enough, to get around and learn all the things that we want to, and it is almost impossible for us to get a full picture of the world.

Is there a way out of the dilemma? I think there is—a fair one for you and me, and, I hope, a much better one for our children. The modern world needs men who will survey the entire field of human knowledge, spend their time gathering together the things that the specialists have learned, and then relay it to the rest of us in an intelligible form. Today even the specialists are almost as ignorant as the layman, because of the demands of their own specialty. We need interpreters, encyclopedists—synthesists, I like to call them.

Surprising, that the data actually is available. God knows that no one can even hope to cover even a small corner of the scientific world these days. I think there's a way out of the dilemma, however, a fair one for us, and a better one for our children. It's the creation of a new technique to cover just that purpose. Men who might be considered encyclopedists, or interpreter-synthesists, I like to call them, men who make it their business to find out what it is the specialists have learned, and then apply it to the rest of us in consolidated form so that we can have, if not the details of the picture, at least the broad outlines of the enormous, incredibly enormous, mass of data that the human race has gathered. The facts behind us, the things that have happened before this moment, so that we can be better able to predict for ourselves, plan our lives after this moment.

So far as I know, only one man has made a sustained attempt to survey the entire field of knowledge and then tell the rest of us what he learned. H.G. Wells is the man—and the greatest of the science-fictionists, I am proud to note. His trilogy The Outline of History, The Science of Life, and The Work, Wealth and Happiness of Mankind embrace the entire field of human knowledge—perhaps the only integrated picture that has ever been drawn of it.

There's only one synthesist who has really made such an attempt up to the present time, and I'm very pleased that it happens to be possibly the greatest of the science fiction writers: H. G. Wells: Wells perhaps didn't do a good job of it—good Lord! he didn't have a chance to; he had nobody before him, he did the pioneer work. He started it. But H. G. Wells, in his trilogy, *The Outline of History*, *The Science of Life* and *The Work, Wealth, and Happiness of Mankind*, is, so far as I know, the only writer who has ever lived who has tried to draw for the rest of us a full picture of the whole world, past and future, everything about us, so we can stand

they weren't able to go far enough in school. I greatly sympathize with that. I'm not trying to play it down, anything of the sort, it's very much of a regret to me that I'm not at least twins and preferably triplets, so that I could have time to study the various things that I'm interested in; and I know that a lot of you have felt the same way, that life is just too—not too short, but too narrow—we don't have room enough, time enough, to get around and learn all the things that we want to, and it is almost impossible for us to get a full picture of the world. 36:17 {51}

Surprising, the data that actually is available. (aside: How're we doing there?) God knows that no one can even hope to cover even a small corner of the scientific world these days. I think there's a way out of the dilemma, however; a fair one for us, and a better one for our children. It's by the creation of a new technique to cover just that purpose. Men who might be considered encyclopedists, or interpreters—synthesists, I like to call them—men who make it their business to find out what it is the specialists have learned, and then relay it, relay it to the rest of us in a consolidated form so that we can have, if not the details of the picture, at least the broad outlines of the enormous, incredibly enormous, mass of data that the human race has gathered. The facts behind us, the things that have happened before this moment, so that we can better able to predict for ourselves, plan our lives after this moment. 37:36 {52}

As far as I know, there is only one synthesist who has really made such an attempt up to the present time, and I'm very pleased that it happens to be possibly the greatest of the science fiction writers: H. G. Wells, H. G. Wells perhaps didn't do a good job of it—good Lord! he didn't have a chance to, he had nobody, he did the pioneer work. He started it. But H. G. Wells, in his trilogy—*The Outline of History*, *The Science of Life* and *The Work, Wealth, and Happiness of Mankind*—is, so far as I know the only writer who has ever lived who has tried to draw for the rest of us a full picture of the whole world, past and future, everything

off and get a look at ourselves.

It does not matter how much to me how imperfect his picture may be; he was a pioneer—the attempt was valiant. And I will guarantee that the mere reading of those three books will do more to orient a man in the universe than half a dozen college educations. I repeat—it is the only whole picture that has ever been drawn; all the others show only little pieces.

It occurred to me that it might be amusing, to me, at least, to try to make a short list of books that tended to fill out the picture, within my limited experience.

For example to name a book on mathematics which would enable a person to whom mathematics has always been a difficult mystery to understand ~~what~~ and appreciate the purpose and nature of the field. There is such a book. It is called “Mathematics and the Imagination” by Kasner and Newman, published by Simon & Schuster.

It will be better in the future. Nevertheless, it was great work, the fact that he *did* it, that he tried at all. A wonderful work. Because he had done that kind of work, that he tried to do that kind of work for the rest of us, is the reason to my mind why his scientific fantasies are more nearly accurate in their predictions than those of, oh, myself, and various other commercial writers in the field. I don’t know as much as H. G. Wells; I probably never will know as much as H. G. Wells—my predictions can’t be as accurate.

But, after considering H. G. Wells’ trilogy, it occurred to me that it would be amusing, to me at least, and I hope to you, for me to mention some books by assorted writers that, to a certain extent, help to fill in the gaps in the picture. And—to a certain extent, help to make up the lack of a broad comprehensive scientific education, which no one, not even Sc.D.s and Ph.D.s, can really have.

For example, in mathematics, is there one book which will help the non-mathematician, the person who hasn’t specialized in it and made it his life work, to appreciate what mathematics is for? I’ve run across such a book; it’s called *Mathematics and the Imagination* by Kasner and Newman. You don’t have to have any mathematical education to read it. To my mind, it’s a very stimulating book, a very interesting book, and when you’ve finished reading it, you at least know what the mathematicians are doing and why. Among other things, you will discover—and this runs entirely contrary to our orthodox credos—that mathematics is not a science. Mathematics is not a science at all—it’s an aspect of symbology, along with the alphabet. That there is no such thing as *discovering* mathematics, for example. Mathematics is invented; it’s an invented art, and has nothing directly to do with science at

about us, so that we can stand off and get a look at ourselves. 38:32 {53}

It’ll be done better in the future; nevertheless, it was a great work, the fact that he *did* it, that he tried *at all*. A wonderful work. And because he had done that kind of work, that he tried to do that kind of work for the rest of us, is the reason to my mind why his scientific fantasies are more nearly accurate in their predictions than those of, oh, myself, and various other commercial writers in the field. I don’t know as much as H. G. Wells; I probably never will know as much as H. G. Wells; my predictions *can’t* be as accurate. 39:11 {54}

But, after considering H. G. Wells’ trilogy—*Outline of History, Work, Wealth, and Happiness of Mankind and The Science of Life*—it occurred to me that it would be amusing, to me at least, and I hope to you, for me to mention some books by assorted writers that, to a certain extent, help to fill in the gaps in the picture, and to a certain extent, help to make up the lack of a broad comprehensive scientific education, which no one, not even Sc.D.s and Ph.D.s, can really have. 39:54 {55}

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all, except as a tool. And yet you will hear the ordinary layman speaking time and again of mathematics a science. It just plain is not because it has no data in it: purely inventions, every bit of it, even the multiplication tables. Yes,  $2 \times 2$  is 4 is an invention in mathematics, not a fact.

In physics there is Eddington's "Nature of the Physical World", a book as exciting as any fiction. It is fifteen years old and should be supplemented by a very recent book. White's "Classical and Modern Physics" 1940 is such a book.

There are other such books. In physics, there is Eddington's *Nature of the Physical World*, I think one of the most charming books ever written, one of the most lucidly and brilliantly written books. It gives a beautiful background to modern physics. It's approximately fifteen years old, so in order to cover a lot of the things are currently being used for fiction in the science fiction field, you would need to supplement that. The book I got for my own purpose to supplement it—because, you see, I'm not a professional physicist, I'm an engineer—to help to bring it up to date, is White's *Classical and Modern Physics*, published in 1940. It is about the latest book-bound thing on modern physics that I know of. There are later things in such publications as *Physical Review* and *Nature*, but this goes up to and including the fission of uranium. It includes nuclear physics, and it delighted me to find the thought that, very likely when we got around to it, we'd find life on other planets. A very stimulating thing to get from a professional scientist, particularly in the field of *physical* sciences. I picked that book because White is an associate of Lawrence in the nuclear laboratory at Berkeley. In other words, he is in on the ground floor, he knows what he's talking about. It's modern physics, 1940, the best up to that time.

In astronomy I have never seen anything to equal John W. Campbell's series on the solar system in the back files of *ASTOUNDING*. Too bad he did not extend it to include stellar and galactic astronomy.

So far as astronomy is concerned, I've never seen anything that surpassed, for a popular notion of the broad outlines of the kind of physical world we live in, than John Campbell's series that appeared in *Astounding*. They started in 1936, and ran on for fifteen or

directly to do with science at all, except as a tool. And yet you'll hear the ordinary layman speaking time and again of mathematics as a science. It just plain isn't because it has no data in it; purely inventions, every bit of it, even the multiplication tables. Yes, the multiplication tables,  $2 \times 2$  is 4 is an invention in mathematics, it is not a fact. 41:26 {56}

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So far as astronomy is concerned, I've never seen anything that surpassed, for a popular notion of the broad outlines of the kind of physical world that we live in, than John Campbell's series that appeared in *Astounding*. When did they start?—Julius Unger could tell us,

sixteen issues, his articles on the solar system. I've always been sorry that Campbell did not go on from there and cover stellar astronomy, galactic astronomy, and some of the other side fields. But, even at that, anybody who has read through that series by Campbell on the solar system will never again have a flat-world attitude, which most people do have. Not in the science fiction field, of course—I mean not among fans of science fiction.

(I speak many times as if the human race were divided into two parts, as it *may* be; people who love science fiction, and people who don't. I think you will be able to keep sorted out which ones I'm talking about. I hope so.)

In the field of economics I believe that Maurice Colbourne's "Economic Nationalism" is the most illuminating book I have ever read.

In the field of economics, an incomplete science, but nevertheless one that you can't possibly ignore, I think the most illuminating book I've ever read is one by Maurice Colburn, called *Economic Nationalism*. The title won't give any suggestion of what the contents are, but that is simply the tag by which it is known.

Jim Farley's *Behind the Ballots* is probably as nice a job of recording actual data in politics as I've ever seen; however, politics—I'd never recommend that people read books in the political field. Go out and take a look *yourself*. Everything else you hear is guff.

I have saved for the last a book that heads the "must" list—"Science And Sanity" by Alfred Korzybski. I am not going to attempt to say what is in it—if I did we would be here the rest of the night and tomorrow too. It is a hard book to read, but I believe that it is probably the most important book you will ever get hold of. It is the basic work in general semantics and it attacks the problems of epistemology.

I saved for the last on that list of the books that have greatly affected me, that to my mind are key books, of the stuff I've plowed through, a book which should head the list on the *must* list. I wish that everyone could read the book. There aren't many copies of it, and everyone can't, nor could everyone read this particular book. All of you could—you've got the imagination for it. It's *Science and Sanity* by Count Alfred Korzybski, one of the greatest Polish mathematicians when he went

I think. (from floor: "1936")—1936, ran on for fifteen, sixteen issues, something of the sort, his articles on the solar system. I've always been sorry that Campbell didn't go on from there and cover stellar astronomy, galactic astronomy, and some of the other side fields. But, even at that, anybody that's read through that series by Campbell on the solar system will never again have a *flat-world* attitude—which most people do have. Not in the science fiction field, of course; I mean not among fans of science fiction. 44:17 {58}

(I speak many times here as if the human race were divided into two parts, as it *may* be—people who love science fiction, and the people who don't—and I think you will be able to keep sorted [laughing] out which ones I'm talking about. I hope so. I get all tangled up. I do better on the typewriter, I hope.) 44:40 {60}

In the field of economics, an incomplete science, but nevertheless one that you can't possibly ignore, I think the most illuminating book I've ever read is one by Maurice Colburne, called *Economic Nationalism*. The title of it won't give any suggestion of what the contents are, but that is simply the tag by which it is known—Maurice Colburne's *Economic Nationalism* 45:05 {61}

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I saved for the last on that list of the books that have greatly affected me, that to my mind are the key books, of the stuff I've piled through, a book that should head the list on the *must* list. I wish, I wish that everyone could read that book—it's just a wish. There aren't many copies of it, everyone can't, nor could everyone read this particular book. All of you could, you've got the imagination for it. It's *Science and Sanity* by Count Alfred Korzybski, one of the greatest Polish

into the subject of symbology and started finding out what made us tick, and then worked up in strictly experimental and observational form from the preliminary work of E. T. Bell.

mathematicians when he went into the subject of symbology and started finding out what made us tick, and then worked up in strictly experimental and observational form from the preliminary work of E. T. Bell. 46:24 {63}

Perhaps those words are strange to you—they were to me when I first ran across the book. I'll give them brief, rough definitions and drop the matter.

A rigor of epistemology based on E. T. Bell [break in transcript here—some words lost] . . . symbology of epistemology. The book refers to the subject of semantics. I know from conversation with a lot of you that the words epistemology and semantics are not unfamiliar to you. But because they may be unfamiliar to some, I'll going to stop and give definitions of those words.

[break].now..The book refers to the subject of semantics. I know from conversation with a lot of you that the words epistemology and semantics are not unfamiliar to you. But, because they may be unfamiliar to some, I'm going to stop and make definitions on those words. 46:51 {64}

Semantics has to do with the whole subject of symbology -- how we think and how we talk. All I will say about it now is that you will be amazed at the amount we take for granted that just ain't so.

Semantics is simply a study of the symbols we use to communicate. General Semantics is an extension of that study to investigate how we *evaluate* the use of those symbols. Epistemology is the study of *how* we know *what* we know. Maybe that doesn't sound exciting. It is exciting, it's very exciting. To be able to delve back into your own mind and investigate what it is you know, what it is you *can* know, and what it is that you *cannot possibly* know, is, from a standpoint of intellectual adventure, I think, possibly the greatest adventure that a person can indulge in. Beats spaceships.

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Epistemology considers how we know what we know -- the basis of all knowledge. That may not sound like an exciting subject, but it is! And again, that way lies sanity and security in a changing world.

Incidentally, any of you who are going to be in Denver in the next five or six weeks will have an opportunity, one of the last opportunities, to hear Alfred Korzybski speak in person. He will be here at a meeting (similar to this) of semanticians from all over the world; McLean from Los Angeles, and Johnson from Iowa, and Reisser from Mills College and Kendig and probably Hayakawa from up in Canada—the leading semanticians of the world—to hear Korzybski speak. It is much better to hear him speak than it is to read his books. He's limited by the fact that he's got to stick to the typewriter, to the printed word, but when he talks, when he talks, it's another matter! He gestures, he's not tied down with his hands to the desk the way I am, he

Incidentally, any of you who are going to be in Denver in the next five or six weeks will have an opportunity, one of the last opportunities, to hear Alfred Korzybski speak in person. He will be here at a meeting similar to this of semanticians from all over the world—Oh, McLean from Los Angeles, and Johnson from Iowa, and Reisser from Mills College and Kendig and probably Hayakawa from up in Canada—the leading semanticians of the world will be here to hear Alfred Korzybski speak. I think starting August 9<sup>th</sup>, isn't it Missy? The early part of August. And it'll be in the papers in any case. And it's much better to hear him speak than it is to read his books. 'Cause in reading his books, he's limited by the fact that he's got to stick to the

walks, stumps all around the stage, and waves his hands, and when he's putting quotation marks on a word, he puts them on . . . [illustrates, audience laughs]. And you really gather what he means. Incidentally, he looks like Conan Doyle's description of Professor Challenger if Professor Challenger had shaved his beard. Dynamic character. You may not like him personally, but he's at least as great a man as Einstein, at least, because his field is broader. The same kind of work that Einstein did, the same kind of work using the same methods, but in a much broader field, much closer to human relationships. I hope that some of you will be able to hear him. I said that this will be one of the last chances, because the old man's well over seventy now. As he puts it, "I vill coagulate someday, I vill someday soon, I vill coagulate," which is the term he uses for dying. He speaks in terms of colloidal chemistry. Properly, it's appropriate. He won't last much longer. In the meantime, he's done a monumental piece of work that H. G. Wells did in the matter of description, and the two together are giants in our intellectual horizon, our intellectual matrix today, that stick up over the rest like the Empire State Building.

typewriter, to the printed word; but when he talks—when he talks, it's another matter! He gestures, he's not tied down with his hands to the desk the way I am, he walks, stumps all around the stage, and waves his hands; and when he's putting quotation marks on a word, he puts them on (illustrates, audience laughs)...and you really gather what he means. Incidentally—he looks like A. Conan Doyle's description of Professor Challenger if Professor Challenger had shaved the beard. Dynamic character. You may not like him personally, but he's at least as great a man as Einstein—at least—because his field is broader. The same kind of work that Einstein did, identically, the same kind of work using the same methods, but in a much broader field, and much more closer, much more close to human relationships. That was an aside. I hope that some of you will be able to hear him. I said that this will be one of the last chances, because the old man's well over seventy now; as he puts it, "I vill coagulate someday, I vill someday soon, I vill coagulate"—which is the term he uses for dying. He speaks in terms of colloidal chemistry. Properly, properly, it's appropriate. He won't last much longer, in the meantime, he's done a monumental piece of work. He has worked out in methodology, the same sort of important work that H. G. Wells did in the matter of description; and the two together are giants in our intellectual horizon, our intellectual matrix today, that stick up over the rest like the Empire State Building. 50:36 {66}

[break] say it too well, nor too brilliantly. I'm tired and confused and nervous and quite frankly considerably stirred up by the fact that I was selected as Guest of Honor here. It embarrasses me and at the same time, I enjoyed it. 50:55 {67}

I started out to talk about Science-Fiction, what it meant to me, and how I felt about it. I've wandered all over the map, enjoying the luxury of not being held down by a plot and a set of characters.

I started out to talk primarily about science fiction and I got off on some of my own hobbies. It's a luxury to me not to be held down by a plot and a set of characters. Here I can say anything I like and not be bothered.

I started out to talk primarily about science fiction and I got off on some of my own hobbies. It's a luxury to me not to be held down by a plot and a set of characters. Here I can say anything that I like and aside from this infernal machine, not be bothered. I think I ought to go over that afterwards. 51:18

Nevertheless, there has been a fairly consistent theme to all of my remarks — the belief that it is worthwhile to think about the future, write about the future, read about the future, and that we who make it our hobby are thereby made more civilized, more nearly sane, happier and safer in an ever-changing world. I myself have been a writer of science-fiction for only two years, but I have been an enthusiastic fan of it for twenty years and longer.

I myself have been reading science fiction since Gernsback started putting it out in the *Electrical Experimenter*. Then I read it in *Argosy* and I dug up all that I could out of the Kansas City Public Library. Every member of my family had a library card; there were seven of us, so I could bring home quite a number of books at one time. I wear glasses now as a result. I never had any particular notion of writing it until about two years ago when a concatenation of peculiar circumstances started me writing. I happened to hit the jackpot on the first one, so I continued writing. It amazed me to discover that people gave money away for doing things like that—it beats working.

I myself have been reading science fiction, oh, I don't know, when did Gernsback start putting them in *Electrical Experimenter* (from floor '1913?')—well, I've been reading it about that long. Then I used to read it in *Argosy* and I dug all that I could of that sort of thing out of the Kansas City Public Library. And would get cards from—every member of my family had a library card and there were seven of us, so I could bring home quite a number of books at one time. (I wear glasses now as a result). And never had any particular notion of writing it until about two years ago when a concatenation of peculiar circumstances started me writing it, and happened to hit the jackpot on the first one, so I continued writing it. It amazed me to discover that people gave money away for doing things like that—it beats working. [loud laughter] 52:18 {69}

It is fairly likely that I will not be a writer of it much longer, but I have every hope of being a fan for at least another fifty years.

It's likely that I won't be writing very much longer. With the way things are shaping up, I'll probably have other things I'll have to do, as will others here, whether we like it or not. But I hope to be a fan of science fiction for at least fifty years if I can hold myself together that long and keep from getting my teeth kicked in.

I don't suppose I'll be writing very much longer. Things shaping up the way they are, I'll probably have other things that I'll have to do, lot of us here will have other things that we are going to have to do, whether we like it or not; and I may not come back to it; but I hope to be a fan of science fiction for at least another fifty years if I can hold myself together that long and keep from getting my teeth kicked in. 52:51 {70}

To watch this changing world unfold, and to read guesses as what it may produce — that suits me!

All I really want to do is to hang around as long as I can, watch the world unfold, see some of the changes—what they really are—that suits me.

All that I really personally want to do is to hang around as long as I can, watch the world unfold, see some of these changes—see what the changes really are—that suits me.

I think that concludes it Walt(Daugherty)... Mr. Wiggins. (loud applause) 53:24 {72}