

Name: _____
AP English Language—Summer Reading Overview

Introduction: This packet—and the associated prep work—is meant to give you a grounding in the very basic elements of the AP Language and Composition class. Namely, it will focus on rhetorical analysis, close reading, effective annotation, and rhetorical devices.

Suggested deadlines: The real deadline for your writing assignments will be sometime shortly after school has started in the fall; however, if you wait until the last minute to do this work, you will find yourself quite thoroughly hosed. You will not be able to do this all in one or two days. Best to spread the work out. Doing the work a little bit at a time will also allow you to get feedback on what you've done well and what you need to work on before moving on to the next assignment, and this is the best way to arrive at school in the fall ready to dive into this challenging class.

The readings in your packet will be checked for the quality of your annotations. Any other exercises in the packet will be checked for completion. The paragraphs and essays that you'll write will be submitted on turnitin.com.

The suggested deadlines:

June 12: Watch close reading/annotation introduction and complete close reading of Shylock

June 19: Rhetorical analysis exercise #1—Diction, purpose, audience, tone

June 26: Rhetorical analysis exercise #2—Logos, ethos, pathos

July 10: Rhetorical analysis exercise #3—Repetition, figurative language

July 17: Rhetorical analysis exercise #4—Syntax, miscellaneous devices

July 31: “To the Public” William Lloyd Garrison

August 7: *Silent Spring* Rachel Carson

Read my blog, you guys: A key part of completing these assignments will be reading the accompanying background information or watching the appropriate video-clip from the class blog:

(<http://englishlangsmhsap.blogspot.com/>). Simply read through or watch the accompanying materials and then complete the written assignment. If you have a Google account (or if you sign up—they're free) you can leave questions or concerns in the comments section, and I shall answer you (somewhat) promptly. Materials will be on the blog the week before the suggested due date at the very latest.

turnitin.com: All of your writing will need to be uploaded to turnitin.com, and this is how you will receive your feedback – if your assignments are submitted by the suggested deadline. You will receive credit for work submitted after the suggested deadline, but you will not receive feedback on that assignment. If one of your previous teachers has used Turnitin, simply log in with your normal information. If they have not, you'll have to create an account to login. Once you've gotten into Turnitin, you'll need to enroll in our class using this information:

Class ID: 15336511

Enrollment password: apsummer

If you have any trouble logging in or submitting work please get in touch with me. The sooner the better.

Extra help: I—your future teacher—will be on campus periodically throughout the summer. I will announce when I am coming on the course blog (<http://englishlangsmhsap.blogspot.com/>). You may also email (dpirie@smuhsd.org) or text (650-384-9146) me. If you're struggling to understand anything, struggling to wrangle the needed technology to get this assignment done, or if you just want to see my smiling (maybe—probably not—who knows?) face, it's a good opportunity to take advantage of.

Close reading exercise: Using the introductory video and the provided context, first annotate, then fill out the SOAPStone chart for the passage below.

Context: Shylock is a Jew living in highly anti-Semitic Venice. Shylock has lent money out to an enemy of his named Antonio—a man who has made Shylock endure a number of serious indignities. Instead of charging interest on the money, Shylock takes as collateral a (literal) pound of Antonio’s flesh should Antonio not be able to pay the money back. Turns out, Antonio cannot pay the money, and Shylock is going to get his revenge on him.

Text: Annotate

SALARINO

Why, I am sure, if he forfeit, thou wilt not take his flesh: what's that good for?

SHYLOCK

To bait fish withal: if it will feed nothing else, it will feed my revenge. He hath disgraced me, and hindered me half a million; laughed at my losses, mocked at my gains, scorned my nation, thwarted my bargains, cooled my friends, heated mine enemies; and what's his reason? I am a Jew. Hath not a Jew eyes? hath not a Jew hands, organs, dimensions, senses, affections, passions? fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same winter and summer, as a Christian is? If you prick us, do we not bleed? if you tickle us, do we not laugh? if you poison us, do we not die? and if you wrong us, shall we not revenge? If we are like you in the rest, we will resemble you in that. If a Jew wrong a Christian, what is his humility? Revenge. If a Christian wrong a Jew, what should his sufferance be by Christian example? Why, revenge. The villany you teach me, I will execute, and it shall go hard but I will better the instruction.

Notes: _____

Speaker:	Shylock (add details that you know or can glean about his character)
Occasion:	
Audience:	
Purpose:	To convince his audience of his humanity (add more).
Subject:	
Tone:	

Close reading exercise: Using the introductory video and the provided context, first annotate, then fill out the SOAPStone chart for the passage below.

Context: This speech was delivered at Yankee Stadium on July 4, 1939. The Yankees created an event called Lou Gehrig Appreciation Day to celebrate the career of one of their all-time greatest players, who had just recently been diagnosed with ALS, a neurological disorder with no cure (now referred to as Lou Gehrig’s Disease). Though Gehrig was noted for his reluctance to speak in public, he addressed the crowd. What follows is the full text of his speech.

Text: Annotate

Fans, for the past two weeks you have been reading about the bad break I got. Yet today I consider myself the luckiest man on the face of this earth. I have been in ballparks for seventeen years and have never received anything but kindness and encouragement from you fans.

Look at these grand men. Which of you wouldn’t consider it the highlight of his career just to associate with them for even one day? Sure, I’m lucky. Who wouldn’t consider it an honor to have known Jacob Ruppert? Also, the builder of baseball’s greatest empire, Ed Barrow? To have spent six years with that wonderful little fellow, Miller Huggins? Then to have spent the next nine years with that outstanding leader, that smart student of psychology, the best manager in baseball today, Joe McCarthy? Sure, I’m lucky.

When the New York Giants, a team you would give your right arm to beat, and vice versa, sends you a gift – that’s something. When everybody down to the groundskeepers and those boys in white coats remember you with trophies – that’s something. When you have a wonderful mother-in-law who takes sides with you in squabbles with her own daughter – that’s something. When you have a father and a mother who work all their lives so you can have an education and build your body – it’s a blessing. When you have a wife who has been a tower of strength and shown more courage than you dreamed existed – that’s the finest I know.

So I close in saying that I may have had a tough break, but I have an awful lot to live for.

Notes: _____

Speaker:	
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	

Response: Write a short paragraph (post to turnitin) that responds to the following prompt:

What devices and strategies does Lou Gehrig use to maintain a positive tone throughout his speech?
 What larger purpose might this serve?

Sample opening sentence: In spite of his dire medical situation, Lou Gehrig attempts to deflect any pity fans might feel for him; his use of hopeful and positive diction throughout causes his speech to remain positive in its tone and inspirational in its message.

Close reading exercise: Using the introductory video and the provided context, first annotate, then fill out the SOAPStone chart for the passage below.

Context: From Jane Austen's *Pride and Prejudice*. Mr. Collins, a socially inept minister proposes marriage to Elizabeth Bennet. Pay close attention to the devices he uses to try to persuade his audience and think about whether that appeal is appropriate to his audience and the occasion.

Text: Annotate

My reasons for marrying are, first, that I think it a right thing for every clergyman in easy circumstances (like myself) to set the example of matrimony in his parish. Secondly, that I am convinced it will add very greatly to my happiness; and thirdly -- which perhaps I ought to have mentioned earlier, that it is the particular advice and recommendation of the very noble lady whom I have the honour of calling patroness. Twice has she condescended to give me her opinion (unasked too!) on this subject; and it was but the very Saturday night before I left Hunsford -- between our pools at quadrille, while Mrs. Jenkinson was arranging Miss de Bourgh's foot-stool, that she said, "Mr. Collins, you must marry. A clergyman like you must marry. -- Chuse properly, chuse a gentlewoman for my sake; and for your own, let her be an active, useful sort of person, not brought up high, but able to make a small income go a good way. This is my advice. Find such a woman as soon as you can, bring her to Hunsford, and I will visit her." Allow me, by the way, to observe, my fair cousin, that I do not reckon the notice and kindness of Lady Catherine de Bourgh as among the least of the advantages in my power to offer. You will find her manners beyond any thing I can describe; and your wit and vivacity I think must be acceptable to her, especially when tempered with the silence and respect which her rank will inevitably excite. Thus much for my general intention in favour of matrimony; it remains to be told why my views were directed to Longbourn instead of my own neighbourhood, where I assure you there are many amiable young women. But the fact is, that being, as I am, to inherit this estate after the death of your honoured father (who, however, may live many years longer), I could not satisfy myself without resolving to chuse a wife from among his daughters, that the loss to them might be as little as possible, when the melancholy event takes place -- which, however, as I have already said, may not be for several years. This has been my motive, my fair cousin, and I flatter myself it will not sink me in your esteem. And now nothing remains for me but to assure you in the most animated language of the violence of my affection. To fortune I am perfectly indifferent, and shall make no demand of that nature on your father, since I am well aware that it could not be complied with; and that one thousand pounds in the 4 per cents, which will not be yours till after your mother's decease, is all that you may ever be entitled to. On that head, therefore, I shall be uniformly silent; and you may assure yourself that no ungenerous reproach shall ever pass my lips when we are married.

Speaker:	Mr. Collins (add more about him)
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	

Response: Write a short paragraph (post to turnitin) that responds to the following prompt:

What rhetorical appeals does Mr. Collins use to persuade his audience? To what extent do you imagine those appeals would be effective? Why?

Sample opening sentence: Mr. Collins' use of logical appeals is ill-suited to his purpose, a romantic marriage proposal: as such, the impact on the audience will probably not bring about his desired result.

Close reading exercise: Using the introductory video and the provided context, first annotate, then fill out the SOAPStone chart for the passage below.

Context: Florence Kelley was one of the leaders of the early movement to give women in the United States the right to vote. Though she is remembered mostly as an advocate for women's right, her political activism was broad. She advocated for more progressive labor practices, including higher wages and the elimination of child labor. She delivered the following speech in Philadelphia to the members of a women's suffrage organization.

Text: Annotate

We have, in this country, two million children under the age of sixteen years who are earning their bread. They vary in age from six and seven years (in the cotton mills of Georgia) and eight, nine and ten years (in the coal-breakers of Pennsylvania), to fourteen, fifteen and sixteen years in more enlightened states.

No other portion of the wage earning class increased so rapidly from decade to decade as the young girls from fourteen to twenty years.

Men increase, women increase, youth increase, boys increase in the ranks of the breadwinners; but no contingent so doubles from census period to census period (both by percent and by count of heads), as does the contingent of girls between twelve and twenty years of age. They are in commerce, in offices, in manufacturing.

Tonight while we sleep, several thousand little girls will be working in textile mills, all the night through, in the deafening noise of the spindles and the looms spinning and weaving cotton and wool, silks and ribbons for us to buy.

In Alabama the law provides that a child under sixteen years of age shall not work in a cotton mill at night longer than eight hours, and Alabama does better in this respect than any other southern state. North and South Carolina and Georgia place no restriction upon the work of children at night; and while we sleep little white girls will be working tonight in the mills in those states, working eleven hours at night. In Georgia there is no restriction whatever! A girl of six or seven years, just tall enough to reach the bobbins, may work eleven hours by day or by night. And they will do so tonight, while we sleep.

Nor is it only in the South that these things occur. Alabama does better than New Jersey. For Alabama limits the children's work at night to eight hours, while New Jersey permits it all night long.

Last year New Jersey took a long backward step. A good law was repealed which had required women

and [children] to stop work at six in the evening and at noon on Friday. Now, therefore, in New Jersey, boys and girls, after their 14th birthday, enjoy the pitiful privilege of working all night long.

In Pennsylvania, until last May it was lawful for children, 13 years of age, to work twelve hours at night. A little girl, on her thirteenth birthday, could start away from her home at half past five in the afternoon, carrying her pail of midnight luncheon as happier people carry their midday luncheon, and could work in the mill from six at night until six in the morning, without violating any law of the Commonwealth. If the mothers and the teachers in Georgia could vote, would the Georgia Legislature have refused at every session for the last three years to stop the work in the mills of children under twelve years of age?

Would the New Jersey Legislature have passed that shameful repeal bill enabling girls of fourteen years to work all night, if the mothers in New Jersey were enfranchised? Until the mothers in the great industrial states are enfranchised, we shall none of us be able to free our consciences from participation in this great evil. No one in this room tonight can feel free from such participation.

The children make our shoes in the shoe factories; they knit our stockings, our knitted underwear in the knitting factories. They spin and weave our cotton underwear in the cotton mills. Children braid straw for our hats, they spin and weave the silk and velvet wherewith we trim our hats. They stamp buckles and metal ornaments of all kinds, as well as pins and hat-pins. Under the sweating system, tiny children make artificial flowers and neckwear for us to buy. They carry bundles of garments from the factories to the tenements, little beasts of burden, robbed of school life that they may work for us.

We do not wish this. We prefer to have our work done by men and women. But we are almost powerless. Not wholly powerless, however, are citizens who enjoy the right of petition. For myself, I shall use this power in every possible way until the right to the ballot is granted, and then I shall continue to use both.

What can we do to free our consciences? There is one line of action by which we can do much. We can enlist the workingmen on behalf of our enfranchisement just in proportion as we strive with them to free the children. No labor organization in this country ever fails to respond to an appeal for help in the freeing of the children.

For the sake of the children, for the Republic in which these children will vote after we are dead, and for the sake of our cause, we should enlist the workingmen voters, with us, in this task of freeing the children from toil!

Speaker:	
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	

Response: Write a short paragraph (post to turnitin) that responds to the following prompt:

What rhetorical devices and strategies does Florence Kelley use to connect with her audience? How does she employ those devices and strategies to make her point about child labor?

Close reading exercise: Using the introductory video and the provided context, first annotate, then fill out the SOAPStone chart for the passage below.

Context: Lincoln delivered the Gettysburg Address in 1863 after two Union victories at the battles of Gettysburg and Vicksburg. The Battle of Gettysburg was the largest battle ever fought in the Western Hemisphere, and casualties were immense — 50,000 killed and wounded on both sides. Lincoln was invited to join the dedication of a cemetery there. His talk was part of a larger ceremony, attended by thousands. The full text of the address (272 words) is printed below.

Text: Annotate

Fourscore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation or any nation so conceived and so dedicated can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead who struggled here have consecrated it far above our poor power to add or detract. The world will little note nor long remember what we say here, but it can never forget what they did here. It is for us the living rather to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us--that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion--that we here highly resolve that these dead shall not have died in vain, that this nation under God shall have a new birth of freedom, and that government of the people, by the people, for the people shall not perish from the earth.

Notes: _____

Speaker:	
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	

Response: Write a short paragraph (post to turnitin) that responds to the following prompt:

Analyze the devices and strategies that Lincoln uses to serve his purpose.

Name: _____
AP English Language—Rhetorical Analysis of “To the Public”

Directions: First, read and annotate the text, taking into account the context provided and the devices utilized by the author to serve his or her purpose. Next, complete the SOAPStone and four column rhetorical analysis charts that follows the text. Do not write a response for this reading.

Context: William Lloyd Garrison was a prominent American abolitionist, journalist, suffragist, and social reformer. His newspaper, *The Liberator*, was one of the widest circulating anti-slavery publications of its day. The text that follows is from an open letter to the public (cleverly entitled “To the Public”) published in *The Liberator* in 1831.

Text: Annotate.

During my recent tour for the purpose of exciting the minds of the people by a series of discourses on the subject of slavery, every place that I visited gave fresh evidence of the fact, that a greater revolution in public sentiment was to be effected in the free states—and particularly in New-England—than at the south. I found contempt more bitter, opposition more active, detraction more relentless, prejudice more stubborn, and apathy more frozen, than among slave owners themselves. Of course, there were individual exceptions to the contrary. This state of things afflicted, but did not dishearten me. I determined, at every hazard, to lift up the standard of emancipation in the eyes of the nation, within sight of Bunker Hill and in the birth place of liberty. That standard is now unfurled; and long may it float, unhurt by the spoliation of time or the missiles of a desperate foe—yea, till every chain be broken, and every bondman set free! Let southern oppressors tremble—let their secret abettors tremble—let their northern apologists tremble—let all the enemies of the persecuted blacks tremble.

I deem the publication of my original Prospectus unnecessary, as it has obtained a wide circulation. The principles therein inculcated will be steadily pursued in this paper, excepting that I shall not array myself as the political partisan of any man. In defending the great cause of human rights, I wish to derive the assistance of all religions and of all parties.

Assenting to the “self-evident truth” maintained in the American Declaration of Independence, “that all men are created equal, and endowed by their Creator with certain inalienable rights—among which are life, liberty and the pursuit of happiness,” I shall strenuously contend for the immediate enfranchisement of our slave population. In Park-street Church, on the Fourth of July, 1829, in an address on slavery, I unreflectingly assented to the popular but pernicious doctrine of gradual abolition. I seize this opportunity to make a full and unequivocal recantation, and thus publicly to ask pardon of my God, of my country, and of my brethren the poor slaves, for having uttered a sentiment so full of timidity, injustice and

absurdity. A similar recantation, from my pen, was published in the *Genius of Universal Emancipation* at Baltimore, in September, 1829. My con-science is now satisfied.

I am aware, that many object to the severity of my language; but is there not cause for severity? I will be as harsh as truth, and as uncompromising as justice. On this subject, I do not wish to think, or speak, or write, with moderation. No! no! Tell a man whose house is on fire, to give a moderate alarm; tell him to moderately rescue his wife from the hands of the ravisher; tell the mother to gradually extricate her babe from the fire into which it has fallen; —but urge me not to use moderation in a cause like the present. I am in earnest—I will not equivocate—I will not excuse—I will not retreat a single inch—AND I WILL BE HEARD. The apathy of the people is enough to make every statue leap from its pedestal, and to hasten the resurrection of the dead.

It is pretended, that I am retarding the cause of emancipation by the coarseness of my invective, and the precipitancy of my measures. The charge is not true. On this question my influence, —humble as it is, —is felt at this moment to a considerable extent, and shall be felt in coming years-not perniciously, but beneficially-not as a curse, but as a blessing; and posterity will bear testimony that I was right. I desire to thank God, that he enables me to disregard “the fear of man which bringeth a snare,” and to speak his truth in its simplicity and power. And here I close with this fresh dedication:

Oppression! I have seen thee, face to face,
And met thy cruel eye and cloudy brow;
But thy soul-withering glance I fear not now—
For dread to prouder feelings doth give place
Of deep abhorrence! Scorning the disgrace
Of slavish knees that at thy footstool bow,
I also kneel—but with far other vow
Do hail thee and thy hord of hirelings base:—
I swear, while life-blood warms my throbbing veins,
Still to oppose and thwart, with heart and hand,
Thy brutalising sway-till Afric’s chains
Are burst, and Freedom rules the rescued land,—
Trampling Oppression and his iron rod:
Such is the vow I take—SO HELP ME GOD!

Speaker:	
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	

Name: _____
AP English Language—Rhetorical Analysis of *Silent Spring*

Directions: First, read and annotate the text, taking into account the context provided and the devices utilized by the author to serve his or her purpose. Next, complete the SOAPStone and four column rhetorical analysis charts that follows the text. Do not write a response for this reading.

Context: Rachel Carson's book *Silent Spring* is a landmark document in the environmental movement. It documented the detrimental effects on the environment—particularly on birds—of the indiscriminate use of pesticides. Carson accused the chemical industry of spreading disinformation and public officials of accepting industry claims unquestioningly. What follows is the introduction.

Text: Annotate.

A FABLE FOR TOMORROW

There was once a town in the heart of America where all life seemed to live in harmony with its surroundings. The town lay in the midst of a checkerboard of prosperous farms, with fields of grain and hillsides of orchards where, in spring, white clouds of bloom drifted above the green fields. In autumn, oak and maple and birch set up a blaze of color that flamed and flickered across a backdrop of pines. Then foxes barked in the hills and deer silently crossed the fields, half hidden in the mists of the fall mornings.

Along the roads, laurel, viburnum and alder, great ferns and wildflowers delighted the traveler's eye through much of the year. Even in winter the road-sides were places of beauty, where countless birds came to feed on the berries and on the seed heads of the dried weeds rising above the snow. The countryside was, in fact, famous for the abundance and variety of its bird life, and when the flood of migrants was pouring through in spring and fall people traveled from great distances to observe them. Others came to fish the streams, which flowed clear and cold out of the hills and contained shady pools where trout lay. So it had been from the days many years ago when the first settlers raised their houses, sank their wells, and built their barns.

Then a strange blight crept over the area and everything began to change. Some evil spell had settled on the community: mysterious maladies swept the flocks of chickens; the cattle and sheep sickened and died. Everywhere was a shadow of death. The farmers spoke of much illness among their families. In the town the doctors had become more and more puzzled by new kinds of sickness appearing among their patients. There had been several sudden and unexplained deaths, not only among adults but even among children, who would be stricken suddenly while at play and die within a few hours.

There was a strange stillness. The birds, for example where had they gone? Many people spoke of them, puzzled and disturbed. The feeding stations in the backyards were deserted. The few birds seen anywhere were moribund; they trembled violently and could not fly. It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was now no sound; only silence lay over the fields and woods and marsh.

On the farms the hens brooded, but no chicks hatched. The farmers complained that they were unable to raise any pigs the litters were small and the young survived only a few days. The apple trees were coming into bloom but no bees droned among the blossoms, so there was no pollination and there would be no fruit.

The roadsides, once so attractive, were now lined with browned and withered vegetation as though swept by fire. These, too, were silent, deserted by all living things. Even the streams were now lifeless. Anglers no longer visited them, for all the fish had died.

In the gutters under the eaves and between the shingles of the roofs, a white granular powder still showed a few patches; some weeks before it had fallen like snow upon the roofs and the lawns, the fields and streams.

No witchcraft, no enemy action had silenced the rebirth of new life in this stricken world. The people had done it themselves.

This town does not actually exist, but it might easily have a thousand counterparts in America or elsewhere in the world. I know of no community that has experienced all the misfortunes I describe. Yet every one of these disasters has actually happened somewhere, and many real communities have already suffered a substantial number of them. A grim specter has crept upon us almost unnoticed, and this imagined tragedy may easily become a stark reality we all shall know. ...

THE OBLIGATION TO ENDURE

The history of life on earth has been a history of interaction between living things and their surroundings. To a large extent, the physical form and the habits of the earth's vegetation and its animal life have been molded by the environment. Considering the whole span of earthly time, the opposite effect, in which life actually modifies its surroundings, has been relatively slight. Only within the moment of time represented

by the present century has one species man acquired significant power to alter the nature of his world.

During the past quarter century this power has not only increased to one of disturbing magnitude but it has changed in character. The most alarming of all man's assaults upon the environment is the contamination of air, earth, rivers, and sea with dangerous and even lethal materials. This pollution is for the most part irrecoverable; the chain of evil it initiates not only in the world that must support life but in living tissues is for the most part irreversible. In this now universal contamination of the environment, chemicals are the sinister and little-recognized partners of radiation in changing the very nature of the world's very nature of its life. Strontium 90, released through nuclear explosions into the air, comes to earth in rain or drifts down as fallout, lodges in soil, enters into the grass or corn or wheat grown there, and in time takes up its abode in the bones of a human being, there to remain until his death. Similarly, chemicals sprayed on croplands or forests or gardens lie long in soil, entering into living organisms, passing from one to another in a chain of poisoning and death. Or they pass mysteriously by underground streams until they emerge and, through the alchemy of air and sunlight, combine into new forms that kill vegetation, sicken cattle, and work unknown harm on those who drink from once pure wells. As Albert Schweitzer has said, "Man can hardly even recognize the devils of his own creation."

It took hundreds of millions of years to produce the life that now inhabits the earth eons of time in which that developing and evolving and diversifying life reached a state of adjustment and balance with its surroundings. The environment, rigorously shaping and directing the life it supported, contained elements that were hostile as well as supporting. Certain rocks gave out dangerous radiation; even within the light of the sun, from which all life draws its energy, there were short-wave radiations with power to injure. Given time not in years but in millennia life adjusts, and a balance has been reached. For time is the essential ingredient; but in the modern world there is no time.

The rapidity of change and the speed with which new situations are created follow the impetuous and heedless pace of man rather than the deliberate pace of nature. Radiation is no longer merely the background radiation of rocks, the bombardment of cosmic rays, the ultraviolet of the sun that have existed before there was any life on earth; radiation is now the unnatural creation of man's tampering with the atom. The chemicals to which life is asked to make its adjustment are no longer merely the calcium and silica and copper and all the rest of the minerals washed out of the rocks and carried in rivers to the sea; they are the synthetic creations of man's inventive mind, brewed in his laboratories, and having no counterparts in nature.

To adjust to these chemicals would require time on the scale that is nature's; it would require not merely the years of a man's life but the life of generations. And even this, were it by some miracle possible, would be futile, for the new chemicals come from our laboratories in an endless stream; almost five hundred annually find their way into actual use in the United States alone. The figure is staggering and its implications are not easily grasped 500 new chemicals to which the bodies of men and animals are required somehow to adapt each year, chemicals totally outside the limits of biologic experience.

Among them are many that are used in man's war against nature. Since the mid-1940's over 200 basic chemicals have been created for use in killing insects, weeds, rodents, and other organisms described in the modern vernacular as "pests"; and they are sold under several thousand different brand names.

These sprays, dusts, and aerosols are now applied almost universally to farms, gardens, forests, and homes nonselective chemicals that have the power to kill every insect, the "good" and the "bad," to still the song of birds and the leaping of fish in the streams, to coat the leaves with a deadly film, and to linger on in soil all this though the intended target may be only a few weeds or insects. Can anyone believe it is possible to lay down such a barrage of poisons on the surface of the earth without making it unfit for all life? They should not be called "insecticides," but "biocides."

The whole process of spraying seems caught up in an endless spiral. Since DDT was released for civilian use, a process of escalation has been going on in which ever more toxic materials must be found. This has happened because insects, in a triumphant vindication of Darwin's principle of the survival of the fittest, have evolved super races immune to the particular insecticide used, hence a deadlier one has always to be developed and then a deadlier one than that. It has happened also because, for reasons to be described later, destructive insects often undergo a "flareback," or resurgence, after spraying, in numbers greater than before. Thus the chemical war is never won, and all life is caught in its violent crossfire.

Along with the possibility of the extinction of mankind by nuclear war, Rachel Carson the central problem of our age has therefore become the contamination of man's total environment with such substances of incredible potential for harm substances that accumulate in the tissues of plants and animals and even penetrate the germ cells to shatter or alter the very material of heredity upon which the shape of the future depends. . . .

THE OTHER ROAD

We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road the one "less traveled by" offers our last, our only chance to reach a destination that assures the preservation of our earth.

The choice, after all, is ours to make. If, having endured much, we have at last asserted our "right to know," and if, knowing, we have concluded that we are being asked to take senseless and frightening risks, then we should no longer accept the counsel of those who tell us that we must fill our world with poisonous chemicals; we should look about and see what other course is open to us.

A truly extraordinary variety of alternatives to the chemical control of insects is available. Some are already in use and have achieved brilliant success. Others are in the stage of laboratory testing. Still others are little more than ideas in the minds of imaginative scientists, waiting for the opportunity to put them to the test. All have this in common: they are biological solutions, based on understanding of the living organisms they seek to control, and of the whole fabric of life to which these organisms belong. Specialists representing various areas of the vast field of biology are contributing entomologists, pathologists, geneticists, physiologists, biochemists, ecologists all pouring their knowledge and their creative inspirations into the formation of a new science of biotic controls. . .

Through all these new, imaginative, and creative approaches to the problem of sharing our earth with other creatures there runs a constant theme, the awareness that we are dealing with life with living populations and all their pressures and counter pressures, their surges and recessions. Only by taking account of such life forces and by cautiously seeking to guide them into channels favorable to ourselves can we hope to achieve a reasonable accommodation between the insect hordes and ourselves.

The current vogue for poisons has failed utterly to take into account these most fundamental considerations. As crude a weapon as the cave man's club, the chemical barrage has been hurled against the fabric of life a fabric on the one hand delicate and destructible, on the other miraculously tough and resilient, and capable of striking back in unexpected ways. These extraordinary capacities of life have been ignored by the practitioners of chemical control who have brought to their task no "high-minded orientation," no humility before the vast forces with which they tamper.

The "control of nature" is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man. The concepts and

practices of applied entomology for the most part date from that Stone Age of science. It is our alarming misfortune that so primitive a science has armed itself with the most modern and terrible weapons, and that in turning them against the insects it has also turned them against the earth.

Speaker:	
Occasion:	
Audience:	
Purpose:	
Subject:	
Tone:	