Introduction Linguistique a l'Histoire. This book, although written in French, has an index. In this index, the words that signify the acts of hearing, listening, obeying, understanding are not to be found, even the word 'oreille', the ear, is missing. This is no accident. Our philology is built around the process of talking, speaking, writing. The process of hearing is left to separate departments, as military training for obedience, understanding to psychology, listening and learning to accutics and education. All these are arts that deal with language incidentally only. It is, for instance, well known that a voice of the right kind is the most precious quality of a man in command. This, however, is not treated as a universal problem of human nature, but occurs in the soldier's education only.

Let us try to compare the system of hearing to the process of speaking. It is not improbable that the variety and ways of hearing may surprise us. Perhaps, we shall find that the apparatus by which men hear is not at all limited to the ear. Would not such an observation be valuable for the interpretation of speech? Is it possible to limit the process of speaking to fifty per cent of one unified process, to the operations that go on in the speaker only? May we limit any metabolism in our body to one arbitrary phase? Does not the final process

only explain the intention of the beginning? In digestion, we take it for granted that chaff and bulk are necessary for the inner tract and that only a little amount of the food is retained in the body. Is it not a justified question to ask ourselves how language must be composed in order to reach the listener so that he is set in motion and begins to acquire a fragment of the information and content of that what the speaker has said?

Perhaps this explains why we have to say a thousand times something that the students all grasp once. Perhaps this assounts for the fact usually overlooked that education for science, itself, cannot be scientific. The process of producing scientists is educational. And education is not applied science. To educate means to be a representative of creation. The long-range processes of listening: this is education. Years and decades must go by till the listener has caught up with the speaker, in a thorough going education. Our analysis of listening, then, is the basic inventory of the means at our disposal when we educate.

The listener's tract is one-half of the social relation that is established by the process of speech. And this half is as varied, as complex, as the speaker's tract. We already know that a speaker represents the different fronts of reality by different language, that he communicates imperatival, optative, indicative and adjectival aspects of reality. How far is the listener moved to the same front of reality? How far do we paralyze the communication by overlooking the complexities of the listener's tract?

It may help us to observe, with van Ginneken, that in any act of listening and understanding, as of speaking, the human body is involved in at least four ways. The innervation of the whole system of respiration and oration, the gesture system of rump, head and hands, our sense of audition, and our sense of vision, all are occupied. We cannot think or realize cortain spoken words, or conceive of certain things, when any one of these systems are occupied by other activities. By a study of the different types of aphasy and agraphy, it has been shown that in order to hear and to understand, we not only need our ears or our eyes. We also must feel free to innervate our larynx, tongue, mouth, etc., and we must feel able to re-enact some of the gesticulations of the interlocutor, or, in their place, some of the movements necessary to write the words down. Whenever one of the four innervations, inner respiratory-oral tract, outer gesticulation (or instead, graphical movement), audition, vision, is jeapardized, disturbance results. They all are essential in the linguistic process.

Even the smallest unit, one word, is a combination of speaking and listening activity. Vowels are preferably that what we hear, consonants preferably that what we enact, in a word. The speaker hears his vowels and produces his consonants; the listener innervates the consonants spoken, unconsciously, and hears the vowels. The brilliant test for this interplay of two processes, is found in the transcription of patois, in poetry, like Moliere, or Balzac. Satirizing the peasant or Alsatian, the writer is able to transcribe the vowels. Nowhere

does he succeed to transcribe the consonants as actually spoken. He fails to innervate, to re-enact the sounds of the consonants as produced by the idiomatic speaker. Not his audition goes wrong - as proved by the vowels - but his participating innervation, in his process of listening. He mishears because he does not enact; and he ascribes a fantastic phonetics to the peasant.

That the graphic picture and the written language play a powerful part in modern man's understanding we all agree. Many words are pronounced on the basis of their arbitrary orthography; orthography changes phonetics. And the reproduction of the written picture is essential to our understanding, in our memory. However, it would seem that vision has always played a great part in language. From the very beginning, gesticulation rivalled with sounds. Gesticulation, in special cases, may take over the whole burden of speech. And it is possible that writing and reading are enlargements on this original share of gesticulation and vision, in speaking. That we should be helped in thinking by innervating the movement outside our body as well as inside our body, is not far-fetched. When Jesus drew lines with his finger in the sand, with the adulteress standing by, waiting for his answer, his was an eloquence of listening in which hearing and writing were fused in one.

The degree of intensity in speech and listening, then, may differ widely. When we sing the whole thorax is at work; when we whisper, we barely open our lips. Many forms of speech lie between these extremes. In a similar way, I may listen with

my ear, with my eye or with my whole system. In my own experience, I would say that sounds pierce from the ear right to the heart; pictures, written words and vision, never do this; they register with me in the brain. Frightful news, fear, penetrates under the diaphragm. And the ancients knew this fact very well. The fact that our eyes report to the brain, our ears not necessarily so, would seem to deserve some better attention by educators. However, this single point may be, we here only have to record that any listener performs a long sequence of participating enactments in a perfect process of listening:

- 1. He hears noise, sounds, vowels.
- 2. He re-innervates the speaker's consonants.
- 3. He registers, records the complete word, sentence, phrase.
- 4. He recalls the conceptual meaning, its indicative content rationally (for instance, Beethoven's Ninth Symphony when montioned in conversation, he will store away and classify).
- 5. He re-enacts the emotions behind the phrase; he is moved.
- 6. He re-enacts the representations condensed into the word.
- 7. He re-enacts the processes represented; he does something about the cosmic processes communicated to him, following them up by acts.
- 8. He gets the word out of his system, forgets it.

The whole process leaves the listener undamaged only when he can go through all the movements during his life. The news is good news for him, when he finally can forget about it because he has done something about it, and lives on. To forget a thing which he learned before we remembered or felt or acted would be wrong. Never to forget anything is an obsession. There is a time for memory as well as for forgetting. In education, we

take little advantage of the two facts, as being equally legitimate because we do not openly assign them a moment in time.

The usual experience with instruction, of course, is that it is remembered merely. Although we feel that this reaction is inadequate, and feel like cheked, we do little about this. The reaction - as we now may see - must involve our whole system. Or, the listening process has not established a social metabolism. It now makes us sick. The outlet, perhaps, should be tears, joy, laughter, sentiment. Or when our alarm clock rings, the best thing is to jump out of bed. People who do not jump out of bed after the clock rings, usually have an unpleasant feeling, like a tremor. They feel shaky because they do not enact the best reaction: to jump out of bed, which would get the alarm out of their system.

Now let us parallel the speaker's and the listener's efforts. The listener follows the suggestions of the speaker. He is inclined to re-enact as much of the act of communication as the speaker intended to actualize. The listener tries to mobilize no more and no less energy than the speaker mobilized. The wretched experience of the devoted amateur with the hard-boiled expert always is that the amateur listens, heart and soul, and the expert coughs, with a surpressed yawn. Or, the listener is bored, and the speaker shouts, as at an auction. This discrepancy is the most serious disease in society. When two experts talk, both with the augur's smile, it does not hurt. When two boys are intoxicated, everything is fine.

It is the discrepancy that endangers our social system because

speech is absued, in these inadequate responses, by one of the two interlocutors. It has been a lasting shock in my youth to find out later that the other person was not in earnest where I was. The protective coloring of youth against this danger is indifference; and it seems to be altogether not unknown in New England colleges. The boys are right. The danger is too great that they incur situations in which the teacher plays safe and leans back. And this fear is behind much of our failures.

effort, to me, seems the central disturbance in the transmission of the cosmic processes through speech. The singer may think that he sings; the listener only hears a noise; no artistic pleasure is communicated. I make contacts to get action; the listener stores my communication away in his memory. This bears out a great and striking difference in the attitude of a speaker and a listener, in scientific reading. A scientist who is making a statement as the result of ten years of work reaches his listener's memory, only, in our modern form of learning. That means that the student places this statement into his organ for historical facts. To remember something, transforms it into a part of our historical imagination. O yes, we say, that is so, and go on with new curiosity to the next item of news.

Teacher and student never register with the corresponding organ, as long as the scholar is a research man and conveys first hand knowledge. It will always remain second hand knowledge for the student. He will locate it in his memory whereas

it fills the whole system of the scientist. Any philosophy is deteriorated by the fact that it is memorized by the disciples. They store it in a part of their body which is unable to produce similar effects in their life as the philosophy produced in the thinker himself. Only when the philosopher can get his hearers to do something about it, to feel it, to remember it, and to register, only then has he found heirs to his bequest to posterity.

The paralysing effect of memory on the true meaning of a word said by a man who means business, who offers this as his last word, cannot fail to produce disastrous effects. The neglect of the need for memorizing would be not less disastrous. It is not enough to do 'anything' about it. The disciples of Ruskin followed his challenge to establish a work camp. But when they got American money, they changed their purpose to building a college for workers. They turned the words of Ruskin upside down, and this quite literally: Ruskin College is an offense to Ruskin's intention. They did something about it. But they did not remember what Ruskin had taught. Ruskin had deep feelings about manual work and its honor. The students had charitable leanings toward the poor.

The impulse: To do something about it is very often today coupled with a perfect misunderstanding of the meaning. And the complete understanding of the idea is found in people who would like to kill the person who does something about it.

The tragedy of Greek philosophy was and is to be found in modern times again, in this misunderstanding of the process of hearing and learning. All the process of thinking in the

schools of philosophy is a tradition of dialectical contradiction between teacher generation and student generation, with an endless chain that at the end produced a catalogue of all possiblisms. No, -ism, however, was more valid than any other. They all held sway over one generation. But all came about by the fact that the students stored the words of the master away in their memory. Then, their own living experience came into play, in the heart and under the skin, and this personal experience asked for articulation. And it could find this articulation not in supplementation to the teacher's doctrine, but only in diametrical opposition. Why? Because memory is a faculty to keep the past, and the new experience was articulated abruptly. The power of recognition that enables us to identify our own new experience with the record of past experience is a power that transcends logic and definitions. The power of identifying us with people, who express their ideas in other terms, requires a quality of the mind that is much rare than logic or memory or sentiment. It requires the superior power cultivated by the church and in the family: the power of translating for the sake of mission and education the eternal truth into the language of the times. The power of translating fuses the different ways of understanding. But the memorizing student of Thomas Aquinas or of Hegel was perfectly unable to do just that.

Another tragedy becomes clear when we discriminate between the organs through which we complete our process of listening. This is the dilemma of modern propaganda. We all tell other people, we all persuade and spread the news and blow the horn.

This is not propaganda, in any specific sense. To speak means to propagate the world's actions by communication. We propagate when one organ of speech is active on the speaker's side and the listener's organ of hearing is more powerful. When I sing and my listener is an effete aesthetic critic, he will abuse me for my innocent song which he takes to be a case for scientific analysis, perhaps as a mere critic. Instead of singing with me, he dissects my singing. The opposite happens when the propagandist coldbloodedly instills me with an opinion he has calculated to arouse my feelings. And which not even he himself thinks to be true. His mouth, without his deeper system, speaks; my heart listened and my feelings are roused. This inadequacy is so frightening in propaganda. I have to turn here against the American Institute for the study of propaganda that has abandoned all attempts to define propaganda. Or, propaganda is stigmatized as working up our emotions. However, I do wish to work up my reader's emotions as much as his actions, his intelligence and his senses. Or, I would not educate. Scientific education is nonsense. As far as it is education, all education must create life, habits, understanding, memories, plus feelings. Or it just is not education. And also, it is legitimate to arouse emotions. The only condition is that the speaker himself is moved, too. That he shares the process of the listener to a certain extent. But, in propaganda, Mr. Goebbels acts differently. Climbing down from his hustings in the Lustgarten in Berlin in 1932, he turned to his friend Goering and asked: "Did I put in too much heat? Shall I be colder next

next time?" This is propaganda. All attempts to define propaganda without a negative qualification of the devil in our nature is hopeless. The devil tries to get something for too cheap a price. The cool speaker cannot buy and shall not buy a deep sentiment by his standing aloof. This is diabolical. And, the lack of courage to recognize that this has been called diabolical for eighteen hundred years, the fervent endeavor, on the side of descriptive science to treat propaganda as something more new than bad, more technical than eternal, is, I think, obstructive to its understanding. The liar is as old as truth. Men have lied ever since they spoke the truth. And lying has various forms. One is the discrepancy between the investment made by the speaker and the speculative results he thinks he may produce in the listener. There are many other forms of lying, hypocrisy, positive lying which in themselves, also, are diseases of speech that are highly enlightening as to the charactor of speech. The abuse of the listener's tract by technical means that conceal the lack of animation in the speaker, must be admitted as a special sort of lying that is rampant today because of the anonymity of the modern means of communication. Propaganda is impossible where the people who speak together, also live together. In a community that shares their lives for a long time, words bear fruit (which is the literal sense of propaganda), and yet, nobody in such a community would be surprised that words beget what they were created for: memories, intelligence, feeling and actions. It is only when the speaker and the listener know each other less and less that the discrepancy between the effort and sincerity on the side of the speaker, and the reaction of the heart of the listener, becomes intolerable.

We may draw a list of corresponding features between speaker and listener:

	Speaker	Listener
1.	Chats	smiles
2.	Talks	listens
3.	Tells	remembers
4.	Teaches	learns
5.	Sings	feels
6.	Commands	obeys
	Argues	understands
8.	Prophesies	carries out

In all social disintegration, the relations between the two sides of the process are confused or interrupted.

The purpose of speech is to animate the listener to the degree to which the speaker himself is animated. When the speaker is not animated, it is diabolical to animate the listener. For, the purpose of speech is to communicate cosmic processes. And the only guarantee of their correct transportation and spread is the spensorship by the speaker, in his own service as carrier of the news. The man who expects his listener to do something must have done something about it himself. The man who asks me to feel something about it, must have felt himself that this is heart rending and moving, etc. However, the listener has a great advantage over the speaker. A man who does something because he is moved to act by another man's challenge, does that what he does in response to a human word. And this fact is an incredible relief to himself, because he follows a predecessor. Most of the honor of men is in their

listening so deeply that they feel challenged to act as the speaker expected them to act. It is one of the fallacies of modern argument that free men do not want to act under another's command. This is a complete misunderstanding. Love your neighbor as yourself and God with all your power is a command that does not take away from any man's freedom. The words 'Love men as God loves you', again is the most emancipating sentence. And it must be said, or man is not emancipated to his own full power and liberty.

Robert Frost has a poem about two roads in the woodland, and that he took the less beaten track. Superficially, that seems to hint to the fallacious modern idea: Don't let anybody tell you. The less beaten track might seem to be the track less spoken of. This is not so, for otherwise Frost would not have tried to propagate the truth that man must follow the less beaten track. By writing, printing, and publishing it, Frost propagates this real experience of man's place in the cosmos and of the action expected from man in this cosmos. We are told to take the track that is new and difficult. We are told. We listen, and perhaps, we obey. The beaten track is not the track that people talk you into; it is the track people advise you to take because it has been taken before. The beaten track is not bad because it is talked about; it is the wrong track because it has been taken before. The track is wrong because it is a repetition, not because it is recommended. And against the speakers that tell the boy: become what we all know men usually become, Frost says: the only path that deserves to be

talked about is the new one. In other words, he draws attention to the fact that recommendations and advice, and commands must point to the future, the real, unknown and unheard of future in order to be meaningful. He restores the meaning of a path into the future. He does not dissuade man from telling the young what to do. History narrates the beaten tracks. And education must avoid the pitfall of suggesting that the track beaten now was beaten when, on it, men made history. Yet, they made history with conviction because a speaker or many speakers had been victors in their teaching the actors of the historical drama. Alexander the Great was the disciple of Aristotle, and Charles the Fifth the pupil of Erasmus of Rotterdam. And Alexander conquered, and Charles the Fifth resigned his crown, both because they had the good fortune of having listened to inspired speech that was victorious. Conviction is more powerful where one man is the speaker and the other the doer, The American educator, today, is frustrated by the general idea, that the speaker and the doer must be one and the same person. How may we teach if this were so? The merciful parsimony of the mental life allows one man to condense his life into telling and another's life into carrying out. To restore the power of teaching, we today must restore the honor of listening.

May I mention a personal experience? After the German defeat in 1918 and '19, life seemed to have gone out of the corpse of the empire. Nobody obeyed. Ten million soldiers, dismissed over night, tried to act, every one of them, for himself and they tried to work out their individual salvation.

Amarchy, absence of government, signified the years usually known as the years of inflation. In trying to find a star to guide me in this night, I decided to serve, to listen. That was the thing not done, not approved of in the new tumult. And so, I forbade myself to teach, and became private secretary to a man who did not look for a private secretary, but whom I asked that he should allow me to listen. I have never felt better than when I took this step from a scholar to a servant; and serving it was, very literally. So, at least I know what I am talking about.

.The listener may go much further than the person who, with great effort, and toward the end of his life, knows what deserves to be said and taught. The listener abbreviates the process of formulating and may do something about it. Alexander the Great is the continuation of Aristotle; he is the good conscience, the superiority incarnate, of Greek thought, over the barbarians. And the amiable and catholic nature of Erasmus, his strength and his weakness are reflected in Charles the Fifth who devoured the new book by Copernicus, saved the unity of Christendom, for another thirty years, loved his Titian, and gave up his throne, disgusted with the world. What about all the Aristotelians? What about all the Humanists following Erasmus? Well, they, in turn, waited for their Alexandersthe Great and their Charles Sixth, Seventh, and Eighth. And some of them may have found them. The best Aristotelian, however, testifies less to the mental powers of Aristotle than Alexander the Great.

We have compared the speaker's ways and the gradation in listening. However, we have omitted one decisive situation between speaker and listener that forms the first phase in the process of listening. The process of language is fifty per cent speaking, fifty per cent listening. Language is not speaking, fifty per cent listening. Language is not speach, it is a full circle from word to sound to perception to understanding to feeling, to memorizing, to acting and back to the word about the act thus achieved. And before the listener can become a listener, something has to happen to him: He must expect. To the silence that precedes the speech, we may compare the expectation that should precede the fact of listening.

Silence is loaded with significance. So is expectation. Our education is handicapped by many gadgets that more or less ignore or cut back expectations. The expectation of the listener does not depend on the speaker; he has not spoken yet. It depends on the authority ascribed to the speaker by the world, the other students, by society. The problem of authority is nearly unknown today, as separate from capacity and from administrative power. And yet, the educational process of the average college student cannot be arranged satisfactorily without the solution of how to awake his expectations. He must be hungry before we can feed him. He is blase, he is indifferent, he is skeptical, he is shy, he is outside the world of which we talk and into which we try to talk him, the world of eternal life. Authority only can make him listen; authority, it is true, is often understood to mean power. Now, parents and

college deans may force a boy to take a course. They, however, rarely are his authorities for expecting great things to happen. Authority is so more subtle that it enters his system much more through the grapevine telegraph of humor, of gossip, of some electricity in the atmosphere, of the remarks of an uncle, etc. We all know that a child sometimes has authorities who have no power whatsoever, and has people in power who have no authority. The material sword of power and the spiritual sword of authority are confused today. And few people would believe me when I say that the teacher, the power of an administration and the authorities of social evaluation, all three are at work to educate a student. Because that is so, to me most discussions of college curricula sound void of authority; ignoring the tripartites, influences that must collaborate, they either give too much to the teacher, or too much to the administration, of the responsibilities implied. We cannot educate without the authority of those who make the student expectant. And I sincerely feel that our students are lacking in expectation because no public inspiration or authority sends them to us. We have before us the task of making the students hungry before we may teach them important things. It is useless to teach those who do not expect to be transformed. They may get memorial verses, instruction, facts. And they will either forget this instruction, these facts, or they will abuse them, only because the ingredient of expectation was lacking that would have made the meal spicey. Not our jokes, not our tricks, can lighten the burden of the student when he is not eager to learn. And

why should he be easer when he does not expect the extraord-inary?

In fact, his modern authorities all unanimously conspire to persuade him that college education is normal, crdinary, regular, the beaten path that he gets something for himself there. And we hasten to prove him day after day how much he gets. The introductory courses are evidence of our feverish anxiety to show him our best things right away. They say that it is no privilege, no service to mankind, no campaign for truth. And so, it degenerates like all selfishness in boredom, drudgery, and the country club. All this because we have overlooked the first stage in the listener's tract of hearing: his expectations, and his authorities that open him up to the important and extraordinary idea that he should listen for four years till he is transformed into a soldier of truth, service and peace for society. Teachers are not facilities for students so that these may work out their own salvation. Teachers are obtacles and difficulties so that the students may rise to their opportunities of the future of mankind. However, we always mention his advantages, his happiness, his future. And so the college is his last school instead of his first campaign in the spiritual militia.

Since he has been to schools all his life, the college is just the next school which is rather degrading for the college by the simple fact that he enters a new school now for the fourth time. Could we not think of giving him a recess during which to get hungry for the college as a really new

situation? Perhaps he should work one year before coming to we college, where or should/make him work, during his sophomore year after having him taught the facts about listening and expecting so that he would not waste his year of practical work, as happens now? Many things could be done; but some things must be done to restore the listener's alimentary tract that leads from expectation to hearing, to listening, to feeling, to remembering, to doing, and that corresponds to the speaker's tract of silence, cry, song, story, argument and command. It is up to this group to discover a curriculum that includes the revival of expectation.

Language is the complete social relation between speakers and listeners. Education is a model and sample, a yardstick, for the innumerable situations in which the student will have to speak and to listen, to expect and to act, to be silent, and to command. When we do not give him one complete experience of the whole process from the beginning to end, when we do not the tell him and show him what authority, what/power to command, what the freedom to serve, mean, then, we cannot call that what we do education. On the other hand, I do not feel that it is so difficult to coordinate a college curriculum around this rather simple aim which takes him through the mental phases that home sapiens, man, because he speaks, has to pass through. We must take him through these phases, show their existence, their validity, their purpose for our victories over the world, and their diseases and decadence by lack of mental faith, love

and hope. And I suppose that that has always been considered the core of the traditions of a Liberal Arts college, of the Humanities, of Science.

How to speak to our students is more difficult than we thought it was. It does not depend on us alone whether we reach his ear, heart, imagination, or not. We teachers and scientists often cannot reach their brain except when the variety of idioms of speech is around them; effectiveness of our teaching depends on the effectiveness of the poetic and artistic life, the loyalties and customs, the family and politics of the country. We do not succeed because the other, supplementary overtures are not voiced, because the alimentary tract that we call listening needs massaging, in all its phases or parts. And difference of poetry, music, prose, mathematics actually plays on the different senses that take part in the process of listening. Only that which we hear with all the powers given man have we heard at all.

We have seen that education is insistent listening and speaking, otherwise, however, just the fresh language of mankind. For this reason, the language of education must always re-unite all professional language, all idioms, into one re-unified, re-translated language of one society. No theory of education is satisfactory because theory is speaking scientifically. Education is the full process of translating, out of the confusion of tongues, in one living language.

on the other hand, education and speech and listoning in general now may be placed on one even more comprehensive plane of time and space. This plane is often overlooked when we think of the active processes in speech only. We already mentioned the problem of silence, and the problem of expectation, that seemed to correspond to silence, on the side of the listener. Education takes time out of the years of a student, and puts him, for a certain time, in a class-the fact room. Education, then, is stressing/that to speak and to listen is impossible without two human qualities: to take time and to give time. Grown-up people take time before they make up their minds. They are silent before they speak. They have taken years to study or to do research.

Youth has an enthusiasm of giving time, to the point of waste. However, the boy who never has wasted time, never will become a man. Some abundance of giving his time in good faith is the condition of being young. The problem is, in education, how to make the student faithful enough to give his inner time to the process, and not just his physical appearance. And how to make him realize that the teacher has taken time. The teacher seems to give; the student seems to take. This is not, as we see now, quite so simple. Content is given by the teacher. But the enthusiasm of giving time, is all on the side of the listener. The importance of a speaker will depend on how much time he has

taken out of his life to have the right to say fust this and to make this statement. The importance of the listening process depends on the recklessness with which the listener forgets all time limits, all end of class schedule, and listens, completely forgetful of any end of time. In taking and giving time, speaker and listener, restore the injured time and space axes of society. In this sense, speech not only sustains the time and space axes, but actually recreates them and by laying emphasis on the otherwise forgotten elements of the world, speaker and listener insist on the resurrection of the otherwise forgotten, by resuscitating life "in the wise" of the word by which all things are made. Therefore, we are mistaken when we ascribe to the imperative the content of being "in the second person". As the six persons in search of an author in the play of Pirandello, the imperative is in search of a subject. Tis said to 'whom it may concern', "Go" does not contain the second person 'you' or 'thou'; what it does is to create this person. For this reason, the imperative is pure verb without an ending. He who does just this, becomes the second person by answering the first person. The listener, who says "I will do it", becomes the person to whom 'go! was addressed. Before, the speaker took the risk to speak to me without any guarantee whether I was human or reasonable or responsive or available, or capable of doing what he asked me to do. That I will go, places me in the position of the man who feels that:

- 1. ho should respond, is his business to respond
- 2. that the thing asked is reasonable
- 3. that he is free to do it (has time)
 4. that he is able to do it (feels like doing it)

The listener, then, makes four statements:

- 1. That he is meant, he is selected to produce the next act in the course of events. Res ad triarios venit. Every imperative creates a hierarchy of people by telling: who next, by throwing out a not to catch the next fish who will swim toward the goal suggested in the command, by putting up a flagbearer, or carrier or actor for the act that is said to be required.
- 2. The process suggested by the fact is "reasonable", does not mean merely that it is rationally explicable, by natural laws; it means that reason requires its coming into being. It is of great importance to see the shape given to the rationality of something in the light of the imperative. It does not give up its rational character; nomothetics, ethics, are not non-rational. However, the reasonable is not concerned with causality, but with filling a gap, restoring an order, add the thing missing to a universe otherwise perturbed. The reasonable appeals to an estimate of the situation which only aks for a comparative: Is it better to do this than to leave it? In other words: true imperatives are not asking: what?, they are only concerned with alternatives: whether or not. Reason,

in the listener's mind, is not in the void of innumerable possibilities. Any superlative answer to the imporatival or suggestive situation is out of the question; the question centers around: is this imperative better than a world without this act? The social division between the speaker and the listener discloses its emancipatory character for the door. Any actor who is not able to hear within himself the clear-cut alternative: shall I do this, or not do this? Anyone who thinks of three, four, or five possibilities at a time is an intellectual stutterer and stammeror. He puts many questions at the same time. And so he cannot answer. This is the disease of our time: conflicting suggestions in groat number. And it is in the face of the imperative that our prismatic reason falters. And I purposely stress the fact that the respondent to an imperative uses reason only for following up his answer to a suggestion. He uses reason not to find out an abstract truth about fact. He uses reason to find out how to go about a concrete suggestion. All planning that starts by abstract reasoning and tries to deduce special solutions from them, twists the order of reasoning. The imperative precedes the use of analysis. The logical analysis is in answer to a specific mandate. Because it is in answer not about an object, but about an act that is in search for its author, the use of reason is concrete,

and boils down to the problem: is there enough suggestiveness in the proposition to interest the listener. To be interested means to be a partner, to be in it. An imperative asks: are you willing to be a part of this dilemma? Are you willing to be subjected to this act of filling a gap? of adding something to the universe, by doing the unum necessarium, the thing that as my shout or cry suggests, is most needed. 'Listen?' 'Be interested', is the most general imperative, or the generality behind the imperative. And it is this command that is behind any word spoken to any one. The imperatival feature remains, then, in all other statements, of purely logical or descriptive or narratory or lyrical character, as the sedimentation of the imperatival phase of all speech. And this command 'be interested' means use your reason with a regard to a concrete decision; what reason does, is not to speculate about: what to do? It only helps to decide whether to do the act at hand. And reason is at a loss to do much more. All questions of fact are subquestions in order to decide over an act to be taken in the future. No "facts" make sense without this primate of the future act.

This is true with respect to the facts ascertained by the layman and by the facts ascertained by science. When we take the statement: the darkened moon, these three words may be pronounced: in the following ways: poetically as beginning a poem:

The darkened moon, and nature looks dishevelled etc.

The poet is under the impression of a disturbance, a great emotional experience.

- 2. It may be in a story. "We all waited till, after midnight, the darkened moon became visible."
- 3. The statement may be in an astronomical treatise: The clear moon has a blue or greenish light. The darkened moon is from gray to brownish. The darkened moon, here is the logical antithesis to the usual moon. The darkened moon is one object of observation and analysis; the moon in general looks different.
- 4. Only now, do we come to the proposition underlying all the three styles mentioned: Look, the darkened moon.

 All statements are intonated in a different way.

 The darkened moon is called to our attention emphatically. the darkened moon! when we shall look at her.

 It is sung rhythmically when we put her in the song of poetic emotion. short long short long short long, etc.

 It is accentuated in the logical opposition: The darkened as

And it is put in its proper place, in the story, as determining the order of events.

against the moon in general

Emphasis is used for the command: look at her rhythm, for the emotion

accent, for the factual definition and propriety, for the story.

Now, the emphasis is, to some extent, kept in the three other statements because in all cases, the listener is expected to pay attention to the darkened moon as something interesting. The quality of the command Look at her, subsists when grammatical transformation stresses rhythm, accent, or propriety. When we come to the scientist's treatment of the darkened moon, we meet with certain changes. The emphasis is nearly gone out of the textbook statement because everything about the moon is gathered here. There, then, is the emphasi in science? However, it is there. It has retreated to the general basis of all scientific data; it runs: let their be science! Without this primary imperative, not one of the statements in a cut and dry textbook makes sense. The sentence now would read: Don't be interested in the darkened moon all by herself but only as part of a system of astronomy, or a system of nature. The emphasis, in scientific description, has shifted from the one new fact to be observed: I look, the darkened moon, to the system in which this event makes sense. Instead of science, or/astronomy, we might say, the statement is harbingered in the greater imperative: let us be systematic; let us build up a system. The event, behind the factual statement: the darkened moon looks brown, on which we insist emphatically, is she event of our being

scientific, and becoming more so all the time. The imperative: let us be systematic, let us be scientific, swallows up our gullability by the small incident of one darkness of the moon. Nevertheless, it is the imperative: Let there be science, that commands our statement. Why do we discriminate between the brown and blue moonlight, between the usual and the unusual appearance of the moon? Because in order to build our system, we take every object apart till it can be put together again systematically. The scientific analysis of the particular is the condition of the systematic synthesis which is our imperative. In this sense, then, all statements of scientific analysis, are merely preliminary to the urge of systematization. In this sense, our accents on one and the other object are preliminary: They are, quite literally, pro-legomena, prefaces, exordia, to the thing that really is upon our shoulders. The emphasis is on the big event of the future: the system. And the indicative does not use up all our breath. We speak, in science, or in mathematics, in a formalized, less emphatic way, nearly without sounds, in signs out of which the full strongth of the imperative has disappeared because this power is saved up for the day of reckoning, the day of synthesis, the day of systematic victory over our scientific task; in this case: astronomy. Scientists have said that science predicts. This is too simple. Science could not predict without promising

or predicting a system of time and space in which all facts, new and old, are contained in their proper order and sequence. The system is predicting. And the future fact predicted, comes in only as a part of the system. The system is the promise of science. For, the system makes the emphasis on any peculiar fact superfluous. In its place and date, the darkened moon of 1945 is not more exciting than the darkened moon of 545 B.C. Every scientific monograph is a prolegomenom to the system that emancipates us from hash impressions and haphazard observations, and overwholming appearances, by the system. The imperative of the scientific undertaking is filled with all the emphasis that the laymen puts on the peculiar event.

However, the objectivity of the sciences is based on the subjectivity of scientists applying to themselves the imperative: let there be science, in the fourfold application:

I am moant
it is reasonable
it is possible
I am free to do it

Under the clause 'subjiciendum est', it has to be undergone, the individual scientist is swayed by the same reason that the layman uses. This reason is not rationality, but suggestiveness of his response to a reasonable command or suggestion. The suggestion: let us have a system, strikes him as reasonable. The powers by which has gives his assent, are not at all rational. For, the thing has to be done in the future, the

science does not exist, now. And so, it is irrational that he joins the army of scientists. However, this is reasonable. Because in making his choice he has to choose between the possibility of a scientific solution and the sensational unrest of daily surprises in his world. And so, it is quite reasonable for society to delegate some men to try their hand in building systems. Now, these same scientists, acting irrationally and reasonably themselves, preach that we should act rationally. This is inconsistent. It cannot be done. And our world goes crazy today because scientists have forgotten the basis of their own actions: that they have chosen between two irrational possibilities of the future: system or no system, the reasonable path of the system, without guarantes of success. Their choice is ennobled only by their willingness to take the consequences, to be condemned to be scientists, and to stick it out. This same choice is asked by any bride, any employer, any farmer, in much the same way. Nowhere have we rational choices. Starting from zero, and determining among fifty possibilities. Always, are we, in the use of our reason, restricted to deciding the dual of two alternatives. Or we lose our reasoning power, in the thicket of possibilities. The word rational does not include the problem of living into the future. It is applicable to objects only. Rationality is impossible when the outcome is unknown, because it lies in the future. And rationality

assumes that we remain unchanged and analyze objects. The future, however, is that situation by which we undergo a change and are transformed ourselves. The entities or selves of scientific analysis are outside myself. The progressive synthesis toward the future appeals to my power to survive myself and to enter a new phase of my own life by outliving myself.