

THE INVASION

FROM MARS

A STUDY IN THE PSYCHOLOGY OF
PANIC ☼ WITH THE COMPLETE SCRIPT
OF THE FAMOUS ORSON WELLES
BROADCAST



By Hadley Cantril

WITH THE ASSISTANCE OF
HAZEL GAUDET & HERTA HERZOG



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CHAPTER II ✨ THE NATURE AND EXTENT OF THE PANIC

LONG before the broadcast had ended, people all over the United States were praying, crying, fleeing frantically to escape death from the Martians. Some ran to rescue loved ones. Others telephoned farewells or warnings, hurried to inform neighbors, sought information from newspapers or radio stations, summoned ambulances and police cars. At least six million people heard the broadcast. At least a million of them were frightened or disturbed.¹

For weeks after the broadcast, newspapers carried human-interest stories relating the shock and terror of local citizens. Men and women throughout the country could have described their feelings and reactions on that fateful evening. Our own interviewers and correspondents gathered hundreds of accounts. A few of these selected almost at random will give us a glimpse of the excitement. Let the people speak for themselves.

"I knew it was something terrible and I was frightened," said Mrs. Ferguson, a northern New Jersey housewife, to the inquiring interviewer. "But I didn't know just what it was. I couldn't make myself believe it was the end of the world. I've always heard that when the world would come to an end, it would come so fast nobody would know—so why should God get in touch with this announcer? When they told us what road to take and get up over the hills and the children began to cry, the family decided to go out. We took blankets and my granddaughter wanted to take the cat and the

See p. 58 below.

canary. We were outside the garage when the neighbor's boy came back and told us it was a play."

From a small midwestern town came Joseph Hendley's report. "That Hallowe'en Boo sure had our family on its knees before the program was half over. God knows but we prayed to Him last Sunday. It was a lesson in more than one thing to us. My mother went out and looked for Mars. Dad was hard to convince or skeptical or sumpin', but he even got to believing it. Brother Joe, as usual, got more excited than he could show. Brother George wasn't home. Aunt Grace, a good Catholic, began to pray with Uncle Henry. Lily got sick to her stomach. I don't know what I did exactly but I know I prayed harder and more earnestly than ever before. Just as soon as we were convinced that this thing was real, how pretty all things on earth seemed; how soon we put our trust in God."

Archie Burbank, a filling station operator in Newark, described his reactions. "My girl friend and I stayed in the car for awhile, just driving around. Then we followed the lead of a friend. All of us ran into a grocery store and asked the man if we could go into his cellar. He said, 'What's the matter? Are you trying to ruin my business?' So he chased us out. A crowd collected. We rushed to an apartment house and asked the man in the apartment to let us in his cellar. He said, 'I don't have any cellar! Get away!' Then people started to rush out of the apartment house all undressed. We got into the car and listened some more. Suddenly, the announcer was gassed, the station went dead so we tried another station but nothing would come on. Then we went to a gas station and filled up our tank in preparation for just riding as far as we could. The gas station man

didn't know anything about it. Then one friend, male, decided he would call up the *Newark Evening News*. He found out it was a play. We listened to the rest of the play and then went dancing."

Mrs. Joslin, who lives in a poor section of a large eastern city and whose husband is a day laborer, said, "I was terribly frightened. I wanted to pack and take my child in my arms, gather up my friends and get in the car and just go north as far as we could. But what I did was just set by one window, prayin', listenin', and scared stiff and my husband by the other sniffin' and lookin' out to see if people were runnin'. Then when the announcer said 'evacuate the city,' I ran and called my boarder and started with my child to rush down the stairs, not waitin' to ketch my hat or anything. When I got to the foot of the stairs I just couldn't get out, I don't know why. Meantime my husband he tried other stations and found them still runnin'. He couldn't smell any gas or see people runnin', so he called me back and told me it was just a play. So I set down, still ready to go at any minute till I heard Orson Welles say, 'Folks, I hope we ain't alarmed you. This is just a play!' Then, I just set!"

Mrs. Delaney, an ardent Catholic living in a New York suburb, could not pull herself from her radio. "I never hugged my radio so closely as I did last night. I held a crucifix in my hand and prayed while looking out of my open window for falling meteors. I also wanted to get a faint whiff of the gas so that I would know when to close my window and hermetically seal my room with waterproof cement or anything else I could get hold of. My plan was to stay in the room and hope that I would not suffocate before the gas blew

away. When the monsters were wading across the Hudson River and coming into New York, I wanted to run up on my roof to see what they looked like, but I could not leave my radio while it was telling me of their whereabouts."

Helen Anthony, a young high school girl in Pennsylvania, wrote that she "kept on saying, 'Where are we going to go? What can we do? What difference does it make whether we get killed now or later?' I was really hysterical. My two girl friends and I were crying and holding each other and everything seemed so unimportant in face of death. We felt it was terrible we should die so young. I'm always nervous anyway and I guess I was getting everybody even more scared. The boy from downstairs threatened to knock me out if I didn't stop acting so hysterical. We tried another small station which had some program on that confirmed our fears. I was sure the end of the world was coming."

Mothers all over the country hastened to protect helpless infants and children. From New England was sent the description of Mrs. Walters. "I kept shivering and shaking. I pulled out suitcases and put them back, started to pack, but didn't know what to take. I kept piling clothes on my baby, took all her clothes out and wrapped her up. Everybody went out of the house except the neighbor upstairs. I ran up and banged on his door. He wrapped two of his children in blankets and I carried the other, and my husband carried my child. We rushed out. I don't know why but I wanted to take some bread, for I thought that if everything is burning, you can't eat money, but you can eat bread."

A mother living in a small eastern town said that "right after we tuned in I had gone out to see my baby,

when my husband called to me. I ran in and got frightened right away. I ran downstairs to the telephone and called my mother. She hadn't been listening. Then I took the little baby and my husband wrapped our seven-year-old child and we rode with friends who live on the street to the tavern where my mother works. By the time we got there my mother had the radio on and all of the people in the tavern were excited. I just sat down and cuddled my baby and shook so that I couldn't talk. I was sick in bed for three days after the broadcast."

A mother in a crowded New Jersey tenement "thought it was all up with us. I grabbed my boy and just sat and cried, and then I couldn't stand it any more when they said they were coming this way, so I turned the radio off and ran out into the hall. The woman next door was out there crying too. Then a man ran up the stairs and when he saw us he laughed at us and said downstairs the people were fooled too, and that it was only a joke. We didn't believe him and told him to pray, but he finally convinced us. He said he had called the police, and they told him it was a play. So I went back into the apartment, and just kept crying till my husband came home, because I was still upset."

A senior in a large eastern college returning from a date with his girl heard the broadcast in his car and, heroically enough, decided to return and rescue her. "One of the first things I did was to try to phone my girl in Poughkeepsie, but the lines were all busy, so that just confirmed my impression that the thing was true. We started driving back to Poughkeepsie. We had heard that Princeton was wiped out and gas was spreading over New Jersey and fire, so I figured there wasn't anything to do—we figured our friends and families were

all dead. I made the 45 miles in 35 minutes and didn't even realize it. I drove right through Newburgh and never even knew I went through it. I don't know why we weren't killed. My roommate was crying and praying. He was even more excited than I was—or more noisy about it anyway; I guess I took it out in pushing the accelerator to the floor. I imagine having to concentrate on the driving held me together somewhat. On Monday after it was all over, and I started to think of that ride, I was more jittery than when it was happening. The speed was never under 70. I thought I was racing against time. The gas was supposed to be spreading up north. I didn't have any idea exactly what I was fleeing from, and that made me all the more afraid. All I could think of was being burned alive or being gassed. And yet I didn't care somehow whether I hit anything with the car or not. I remember thinking distinctly how easy it would be to get shot cleanly in a war. I remember also thinking there wasn't any God. My roommate was really praying and crying all the time. I thought the whole human race was going to be wiped out—that seemed more important than the fact that we were going to die. It seemed awful that everything that had been worked on for years was going to be lost forever. They kept giving these flashbacks and they made it seem so real. I do remember, though, when the commentator said, 'Pierson and I will go over and report,' and then they were on in what seemed about four minutes, and that seemed too short a time, but we didn't take it too seriously. The mention of towns along the highways with names that we knew, and the names of hospitals we knew, seemed so real."

Two thousand miles away, in a small college of a southwestern state, other college students were equally terrified. "The girls in the sorority houses and dormitories huddled around their radios trembling and weeping in each other's arms. They separated themselves from their friends only to take their turn at the telephones to make long distance calls to their parents, saying goodbye for what they thought might be the last time. This horror was shared by older and more experienced people—instructors and supervisors in the university. Terror-stricken girls, hoping to escape from the Mars invaders, rushed to the basement of the dormitory. A fraternity boy, frantic with fear, threw off dormitory regulations when he sought out his girl friend and started for home. Another boy rushed into the street to warn the town of the invasion."

Sylvia Holmes, a panic-stricken Negro housewife who lived in Newark, thinking the end of the world was near, in her excitement overstepped the bounds of her usual frugality. "We listened getting more and more excited. We all felt the world was coming to an end. Then we heard 'Get gas masks!' That was the part that got me. I thought I was going crazy. It's a wonder my heart didn't fail me because I'm nervous anyway. I felt if the gas was on, I wanted to be together with my husband and nephew so we could all die together. So I ran out of the house. I guess I didn't know what I was doing. I stood on the corner waiting for a bus and I thought every car that came along was a bus and I ran out to get it. People saw how excited I was and tried to quiet me, but I kept saying over and over again to everybody I met: 'Don't you know New Jersey is destroyed by the Germans—it's on the radio.' I was all excited

and I knew that Hitler didn't appreciate President Roosevelt's telegram a couple of weeks ago. While the U.S. thought everything was settled, they came down unexpected. The Germans are so wise they were in something like a balloon and when the balloon landed—that's when they announced the explosion—the Germans landed. When I got home my husband wasn't there so I rushed in next door and warned the neighbors that the world was coming to an end. My aunt was there and she tried to quiet me and said, 'If God is coming that way, we just have to wait—go home and be quiet—don't be excited.' I went home. My knees were shaking so, I could hardly walk up the stairs. I found my nephew had come home and gone to bed. I woke him up. I looked in the ice-box and saw some chicken left from Sunday dinner that I was saving for Monday night dinner. I said to my nephew, 'We may as well eat this chicken—we won't be here in the morning.' Then my husband came in. When I told him about it, he wasn't as excited as I was, but he thought it was the end of the world coming, too. He turned on our radio to WOR. It was eleven o'clock and we heard it announced that it was only a play. It sure felt good—just like a burden was lifted off me."

George Bates, an unskilled laborer in Massachusetts spent his savings trying to escape. Somehow he heard of this investigation and wrote: "I thought the best thing to do was go away, so I took \$3.25 out of my savings and bought a ticket. After I had gone 60 miles I heard it was a play. Now I don't have any money left for the shoes I was saving up for. Would you please have someone send me a pair of black shoes, size 9-B."

Sarah Jacob of Illinois, a regular listener to the Mercury Theatre, said, "They should have announced that it was a play. We listened to the whole thing and they never did. I was very much afraid. When it was over we ran to the doctor's to see if he could help us get away. Everybody was out in the street and somebody told my husband it was just a play. We always listen to Orson Welles but we didn't imagine this was it. If we hadn't found out it was a play almost as soon as it was over, I don't know what we'd have done."

Who Listened?

The best direct evidence upon which to base an estimate of the number of people who listened to this broadcast is obtained from a poll made by the American Institute of Public Opinion (AIPO) about six weeks after the broadcast.² In a nation-wide sample of several thousand adults, 12 per cent answered "Yes" to the question "Did you listen to the Orson Welles broadcast of the invasion from Mars?" The representativeness of the sample used by the Gallup survey is based on the characteristics of the "voting public." It therefore contains more men, fewer young people, and, probably fewer southern Negroes than the actual radio-listening public.³ According to the 1930 census there are 75,000,000 persons of voting age in the country.

² This delay was unavoidable due to the fact that sufficient funds were available for the survey only after this time had elapsed. The writer is indebted to Mr. Lawrence Benson and Mr. Edward Benson of the American Institute of Public Opinion for their cooperation during this survey; also to Dr. George Gallup for permitting the facilities of the Institute to be used for this study.

³ For a discussion of public opinion polls and the techniques of measurement, see D. Katz and H. Cantril, "Public Opinion Polls," *Sociometry*, 1937, Vol. I, pp. 155-179.

Twelve per cent of this number would indicate that about 9,000,000 adults heard the broadcast. If we consider all persons over ten years of age, then, according to the 1930 census we shall have 12 per cent of 99,000,000 people, or, almost 12,000,000. It is undoubtedly true that many children even under ten years of age listen to the radio after eight o'clock on Sunday evening, especially when we remember that for more than half of the country this broadcast was at least an hour earlier than eight p.m. In addition to these young listeners, a large number of youngsters must have been wakened by frightened parents preparing to flee for their lives.

The AIPO figure is over 100 per cent higher than any other known measure of this audience. However, since the Institute reaches many small communities and non-telephone homes not regularly sampled by radio research organizations, its result is probably the most accurate.⁴ C. E. Hooper, Inc., a commercial research organization making continuous checks on program popularity, indicates a listening audience of about 4,000,000 to the Mercury Theatre broadcast on October 30, 1938.⁵ If we pool the AIPO and Hooper results, a final estimate of 6,000,000 listeners is conservative. Had the program enjoyed greater popularity, the panic might have been more widespread.

⁴ A critical discussion of methods of measuring the listening audience, by Frank Stanton, *Measuring the Listening Audience*, is scheduled to be published by Princeton University Press, 1940.

⁵ The Cooperative Analysis of Broadcasting report (CAB) did not survey Oct. 30. The Oct. 23 figure is 4 per cent of radio homes; the Nov. 6 figure 7.4 per cent of radio homes. It is not without significance that the program's popularity increased almost 100 per cent in these two weeks and it seems probable that almost this entire jump was due to the excitement and publicity aroused by the Oct. 30 broadcast.

The *regional differences* of the audience are significant. A breakdown of the AIPO figures gives the following percentages of persons who listened.

Mountain and Pacific	20 per cent
Middle Atlantic	15
West North Central	12
East North Central	11
South	8
New England	8

The high percentage of Mountain and Pacific states is undoubtedly due to the fact that listening in general is highest in the far western part of the country.⁶ The low figure for the New England states is due to the fact that Columbia's Boston outlet (WEFI) did not carry the program.

Tabulation by *economic status* indicates that the very poor people did not listen to this dramatic program as much as other economic groups: 13 per cent of the people in the upper and middle income brackets and 9 per cent in the low income group had tuned in. The AIPO figures indicate significant differences according to *age levels*: 14 per cent of young people under thirty, 12 per cent of those between thirty and fifty, and only 10 per cent of those over fifty years of age heard the broadcast. No important sex differences in the composition of the audience appear in the AIPO data. Twelve per cent of the men heard the program, 11 per cent of the women.

How Many Were Frightened?

In answer to the AIPO question, "At the time you were listening, did you think this broadcast was a play

⁶ Stanton, *op. cit.*

or a real news report?" 28 per cent indicated that they believed the broadcast was a news bulletin. Seventy per cent of those who thought they were listening to a news report were frightened or disturbed. This would mean that about 1,700,000 heard the broadcast as a news bulletin and that about 1,200,000 were excited by it.

In spite of the attempt to word the question concerning the individual's reaction in a casual way, it must be remembered that the number of persons who admitted their fright to the AIPO interviewers is probably the very minimum of the total number actually frightened. Many persons were probably too ashamed of their gullibility to confess it in a cursory interview. On the other hand, people would not be so likely to prevaricate when asked whether or not they had heard the broadcast or whether or not they regarded it as news. But there is the possibility that some people heard so much about the broadcast that they reported actually hearing it.

Sectional differences in the reaction are not great except for the small percentage of New England listeners who were frightened. This is probably due to the fact that New England listeners had deliberately tuned in to a relatively remote station especially to hear *War of the Worlds*, since none of the large New England stations carried it. The higher percentage of fright among southern listeners may be due to the larger proportion of poor and uneducated people in this area.⁷ The panic was clearly a nation-wide reaction. The figures below indicate the percentage of those who heard the broadcast as a news report and were frightened.

⁷ For a discussion of the effect of economic status and education on the nature of a listener's reaction, see pp. 113 f.

Sectional differences in extent of fright

New England	40 per cent
Middle Atlantic	69
East North Central	72
West North Central	72
South	80
Mountain and Pacific	71

Reports of high school administrators. Since it was thought that high school principals throughout the country would be in touch with a cross-section of the population and have some evidence of the extent of the reaction in their community, forms were mailed to every twenty-fifth school principal listed in state educational directories.⁸ Of the 1044 questionnaires distributed, 305 or 29 per cent were returned. Thirty-nine per cent of the principals who answered reported that they knew of students in their schools who were frightened by the broadcast. They estimated that on an average about 5 per cent of their pupils were frightened. Since the questionnaires were obviously returned by the most interested administrators, it is difficult to estimate their representativeness. If we consider the number of children in school, it seems likely that approximately one quarter of a million children of high school age were upset by the dramatization.

Telephone volume. Accounts of frantic telephone calls flooding switchboards of radio stations, newspapers and police stations are confirmed by figures

⁸ Although this method of selection covered the country thoroughly, it would not yield names in exact relation to the population distribution since fewer questionnaires were sent to the more urbanized states and to regions most advanced in consolidating rural schools. These objections, however, were not of sufficient importance for our purposes to justify a more elaborate, time-consuming sample.

secured from the American Telephone Company.⁹ An increase of 39 per cent was reported in the telephone volume in metropolitan northern New Jersey during the hour of the broadcast as compared to the usual volume of that hour of the evening. A 25 per cent increase over normal in the same area occurred the succeeding hour. Increases for several suburban exchanges on Long Island for the same hours ranged from 5 to 19 per cent. In six suburban exchanges surrounding Philadelphia, traffic increased 9.6 per cent for the entire day of October 30 and for the entire New York metropolitan area traffic was above normal. Telephone officials see no other way to account for the increased volume than assigning responsibility to the broadcast.

The managers of the 92 radio stations that carried the broadcast were questioned by mail about their telephone volume during and immediately following the program. Of the 52 who replied, 50 reported an increase. Thirty-seven per cent noted increases of at least 500 per cent over the usual Sunday night volume; 31 per cent reported increases below 500 per cent. The others had no figures available. There seems little doubt then that a public reaction of unusual proportions occurred.

Mail volume. The interest the broadcast aroused is further shown by the number of letters written when it was over. Three-quarters of the station managers reported that their mail volume exceeded 100 per cent of the normal number of letters received. Several instances were reported of increases of over 500 per cent. Station WABC, Columbia's key station, was flooded with 1770

⁹ The writer wishes to acknowledge the assistance of members of the Traffic Department in the New York office of the company for their assistance in gathering the data.

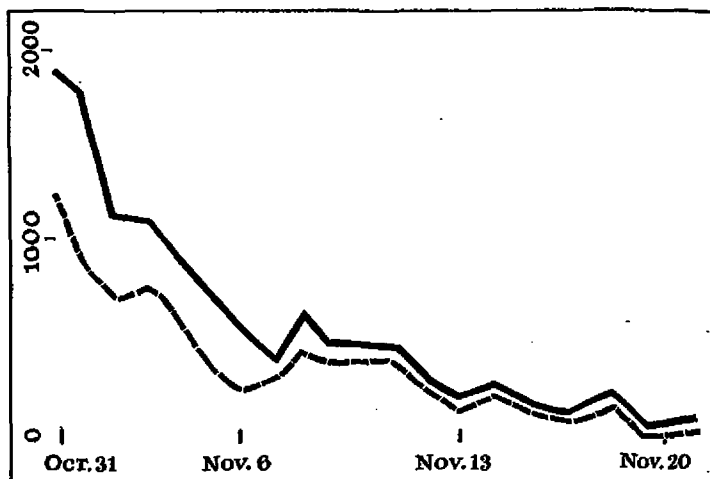
pieces of mail on this one subject, 1086 favorable, 684 unfavorable. The Mercury Theatre itself received 1450 letters concerning the program; 91 per cent congratulating them, 9 per cent condemning them. The Federal Communications Commission received 644 pieces of mail. Sixty per cent of the letters were unfavorable to the broadcast; 40 per cent favorable. These differences in the nature of the letters sent to the federal "watch dog of broadcasting" and to the producers are not surprising. They clearly indicate that those who wanted their protests taken seriously did not hesitate to communicate with the proper authorities, while those who appreciated good drama gave praise where praise was due.

Newspaper clippings. The opinion was frequently encountered the day after the broadcast that the general state of hysteria reported in the newspapers was merely an attempt to find good copy for papers on Monday morning when news is notoriously at low ebb. Even if we assume that less than 5 per cent of the population contributed to the reaction, this is hardly a legitimate suspicion. If something can excite 5 per cent of the population it *is* news. However, the figures above confirm the theory that there actually was something unusual and significant to report. Furthermore, the amount of newspaper space devoted to the episode for two weeks after the broadcast indicates a lingering fascination, although it cannot, of course, refute the charge that many accounts were embroidered to make good stories.

An analysis of 12,500 newspaper clippings appearing in papers throughout the country during the three weeks following the broadcast, reveals that, although the volume of press notices took the usual sharp decline

the second and third days, considerable interest was maintained for five days and had not fallen below 30 per cent of the original volume by the end of the first week.¹⁰ The trend is illustrated in Figure I. It can be seen that newspaper interest did not begin to flatten until the end of the second week. Notices were still con-

Figure I



Solid line indicates number of newspaper items.

Broken line indicates number of newspapers containing items.

tinuing in appreciable volume when this analysis was made at the end of the third week. The increase of news items per paper at the outset is probably due to extra features, human interest and editorial comment.

There can be little doubt that this broadcast did affect a large number of people scattered throughout the coun-

¹⁰ These clippings were collected from newspapers of every state by a reputable clipping bureau. The writer is indebted to the Mercury Theatre for generous permission to make full use of its files.

try. The problem for the psychologist now is to discover why so many people were frightened. This will require first an analysis of the broadcast itself. How was it actually experienced by the frightened listener? Why did he so readily confuse fiction with reality? The answers to these and other questions will occupy us in the next chapter.

“It Didn't Sound Like a Play”

CHAPTER III ✨ HOW THE STIMULUS WAS EXPERIENCED

NO OTHER broadcast has produced a panic comparable to the one which found several million American families all over the country gathered around their radios listening to reports of an invasion from Mars. These reports were brought to them over a national network from New York City, our greatest metropolis, where people should know what is going on. Both the form and the content of the broadcast seemed authentic. As one listener put it "I just naturally thought it was real. Why shouldn't I?"

Even this program did not affect more than a small minority of the listeners. If we are to explain the reaction, then, we must answer two basic questions: Why did this broadcast frighten some people when other fantastic broadcasts do not? And why did this broadcast frighten some people but not others? An answer to the first question must be sought in the characteristics of this particular program which aroused false standards of judgment in so many listeners.

Realism of Program

In spite of Dorothy Thompson's remark that "Nothing whatever about the dramatization was in the least credible, no matter at what point the listener might have tuned in,"¹ no one reading the script can deny that the broadcast was so realistic for the first few minutes that it was almost credible to even relatively sophisticated

¹ "On the Record," *New York Herald Tribune*, Nov. 2, 1938.

and well informed listeners (Miss Thompson excepted). The sheer dramatic excellence of the broadcast must not be overlooked.

This unusual realism of the performance may be attributed to the fact that the early parts of the broadcast fell within the existing standards of judgment of the listeners. By a standard of judgment we mean an organized mental context which provides an individual with a basis for interpretation. If a stimulus fits into the area of interpretation covered by a standard of judgment and does not contradict it, then it is likely to be believed. Just what some of the more accepted and common standards were that provided interpretations for the immediate acceptance of the broadcast as news are given below. Later in our discussion we shall be concerned with the problem of discovering more individualized standards of judgment which accounted for the persistence of the original interpretation even though the events reported became quite fantastic.

Radio as accepted vehicle for important announcements. The first wide use of radio in the country was to broadcast election returns. Since that time, important announcements of local, national and international significance have been repeatedly made. A few short weeks before this broadcast, millions of listeners had kept their radios tuned for the latest news from a Europe apparently about to go to war. They had learned to expect that musical programs, dramas, broadcasts of all kinds would be cut off in a serious emergency to inform or warn an eager and anxious public. A large proportion of listeners, particularly those in the lower income and educational brackets, have grown to rely more on the radio than on the news-

papers for their news.² The confidence people have in radio as a source of news is shown in the answer to a question asked by the *Fortune* poll: "Which of the two—radio or newspaper—gives you news freer from prejudice?" Seventeen per cent answered "newspaper," 50 per cent believed radio news was freer from prejudice, while the rest either thought both media were the same, or didn't know which was less prejudiced.

On this particular night when the listener tuned to the Mercury Theatre, he heard the music of "Ramon Raquello and his orchestra" coming from the "Meridian Room" in the "Park Plaza Hotel" of New York City. Soon after the first piece had begun an announcer broke in "Ladies and gentlemen, we interrupt our program of dance music to bring you a special bulletin from the Intercontinental Radio News." With our present distance it is easy to be suspicious of "Intercontinental" news. But in the context of the program, such skepticism is reduced. This report brought the story of the first explosions on Mars. The music was resumed only to be followed by another break: "Ladies and gentlemen, following on the news given in our bulletin a moment ago, the Government Meteorological Bureau has requested the large observatories of the country to keep an astronomical watch. . . ." This bulletin contains the information that "a huge flaming object, believed to be a meteorite, fell on a farm in the neighborhood of Grovers Mill, New Jersey." The swing band gets in 20 seconds more. Then the invasion continues uninterruptedly.

² *Fortune*, Aug. 1939, p. 65. A thorough discussion of radio news broadcasting will be given in Paul Lazarsfeld, *Radio and the Printed Page*, now in preparation. (A publication of the Princeton Radio Project.)

Almost all of the listeners, who had been frightened and who were interviewed, mentioned somewhere during the course of their retrospections the confidence they had in radio and their expectation that it would be used for such important announcements. A few of their comments indicate their attitudes:

"We have so much *faith in broadcasting*. In a crisis it has to reach all people. That's what radio is here for."

"The announcer would not say if it was not true. *They always quote if something is a play.*"

"I always feel that *the commentators bring the best possible news*. Even after this I still will believe what I hear on the radio."

"It didn't sound like a play *the way it interrupted the music when it started.*"

Prestige of speakers. It is a well known fact to the social psychologist, the advertiser, and the propagandist that an idea or a product has a better chance of being accepted if it can be endorsed by, or if it emanates from, some well known person whose character, ability, or status is highly valued. The effect of this prestige suggestion is especially great when an individual himself has no standard of judgment by means of which he can interpret or give meaning to a particular situation that confronts him and when he needs or is interested in making a judgment or finding a meaning. The strange events reported by the announcers in this broadcast were so far removed from ordinary experience and yet of such great potential and personal significance to the listener that he was both bewildered and in need of some standard of judgment. As in many situations where events and ideas are so complicated or far removed from one's own immediate everyday experience that only the

expert can really understand them, here, too, the layman was forced to rely on the expert for his interpretation.

The logical "expert" in this instance was the astronomer. Those mentioned (all fictitious) were Professor Farrell of the Mount Jennings Observatory of Chicago, Professor Pierson of the Princeton Observatory, Professor Morse of MacMillan University in Toronto, Professor Indellkoffer of the California Astronomical Society and "astronomers and scientific bodies" in England, France, and Germany. Professor Richard Pierson (Orson Welles) was the chief character in the drama.

When the situation called for organized defense and action the expert was once more brought in. General Montgomery Smith, commander of the State Militia at Trenton, Mr. Harry McDonald, vice-president of the Red Cross, Captain Lansing of the Signal Corps, and finally the Secretary of the Interior described the situation, gave orders for evacuation and attack, or urged every man to do his duty. It is interesting to notice that only the office of the Secretary of the Interior was named. Here the listener was affected entirely by the institutional rôle and status of an unnamed speaker. The institutional prestige of the other experts and authorities is obviously more meaningful and important than the individuals themselves.

This dramatic technique had its effect.

"I believed the broadcast *as soon as I heard the professor from Princeton* and the officials in Washington."

"I knew it was an awfully dangerous situation *when all those military men were there and the Secretary of State spoke.*"

"If so many of those astronomers saw the explosions they must have been real. *They ought to know.*"

Specific incidents understood. The realistic nature of the broadcast was further enhanced by descriptions of particular occurrences that a listener could readily imagine. Liberal use was made of the colloquial expression to be expected on such an occasion. The gas was "a sort of yellowish-green"; the cop warned, "One side, there. Keep back, I tell you"; a voice shouts, "The darn thing's unscrewing." An example of the specificity of detail is the announcement of Brigadier General Montgomery Smith: "I have been requested by the Governor of New Jersey to place the counties of Mercer and Middlesex as far west as Princeton, and east to Jamesburg, under martial law. No one will be permitted to enter this area except by special pass issued by state or military authorities. Four companies of State Militia are proceeding from Trenton to Grovers Mill and will aid in the evacuation of homes within the range of military operations."

Particularly frightening to listeners in the New Jersey and Manhattan areas were the mentions of places well known to them. The towns of Grovers Mill, Princeton, and Trenton, New Jersey were featured early in the broadcast; Plainsboro, Allentown, Morristown, the Watchung Mountains, Bayonne, the Hutchison River Parkway, Newark, the Palisades, Times Square, Fifth Avenue, the Pulaski Skyway, the Holland Tunnel, are all familiar to Jerseyites and New Yorkers. And listeners throughout the country would certainly recognize many of these names as real.

"When he said, 'Ladies and gentlemen, do not use route number 23' that made me sure."

"I was most inclined to believe the broadcast *when they mentioned places like South Street and the Pulaski Highway.*"

"If they had mentioned any other places but streets right around here, I would not have been so ready to believe."

Everybody baffled. The events reported proceeded from the relatively credible to the highly incredible. The first announcements were more or less believable although unusual to be sure. First there is an "atmospheric disturbance," then "explosions of incandescent gas." A scientist then reports that his seismograph has registered a shock of earthquake intensity. This is followed by the discovery of a meteorite that has splintered nearby trees in its fall. So far so good.

But as the less credible bits of the story begin to enter, the clever dramatist also indicates that he, too, has difficulty in believing what he sees. When we learn that the object is no meteorite but a metal casing, we are also told that the whole picture is "a strange scene like something out of a modern Arabian Nights," "fantastic," that the "more daring souls are venturing near." Before we are informed that the end of the casing is beginning to unscrew, we experience the announcer's own astonishment: "Ladies and gentlemen, this is terrific!" When the top is off he says, "This is the most terrifying thing I have ever witnessed. . . . This is the most extraordinary experience. I can't find words. . . ." A few minutes later, Professor Pierson says, "I can give you no authoritative information—either as to their nature, their origin, or their purposes here on earth. . . . It's all too evident that these creatures have scientific knowledge far in advance of our own. It is my guess. . . ." After the battle at Grovers Mill between the Thing and the soldiers, the announcer gives the listeners a final justification for the incredulous reports to follow: "I

have a grave announcement to make. *Incredible as it may seem*, both the observation of science and the evidence of our eyes lead to the inescapable assumption that those strange beings who landed in the Jersey farmlands tonight are the vanguard of an invading army from the planet Mars."

The bewilderment of the listener is shared by the eyewitness. When the scientist is himself puzzled, the layman recognizes the extraordinary intelligence of the strange creatures. No explanation of the event can be provided. The resignation and hopelessness of the Secretary of the Interior, counseling us to "place our faith in God," provides no effective guide for action. No standards of judgment can be applied to judge the rapid-fire of events. Panic is inescapable.

The total experience. Careful observation of everyday life behavior or careful introspection of one's own reactions in the course of an ordinary day, indicate that in social life the normal individual experiences patterns or configurations of social stimuli. It is the "atmosphere" or the "effect" of a social situation that we notice long before we are able (if we happen to try) to analyze precisely what it is in the situation that creates the particular characteristic impressing us. The football fan, wedged in between enthusiastic alumni, listening to the bands and the shouting, watching the teams, has the experience of "being-at-a-football-game"—an experience which is, to be sure, composed of the various stimuli impinging upon him but an experience which results from the perception of all these stimuli as patterned, as coming-together, as being inextricably interwoven in the production of a *Stimmung* he may have travelled miles to experience. A person in church is like-

wise experiencing a social situation with particular characteristics that he can describe with adjectives meaningful to him. Even the "awe" or "deference" one may feel in an empty cathedral seems to be more of an immediate perception than an accretion due to a series of related, specific past experiences.

The importance of creating the proper atmosphere conducive to any desired action is, of course, well known to the revivalist, the cardinal, the dramatist, and, especially today, the dictator. The elaborate preparations made by Hitler and Goebbels for their national and party celebrations are recognized *musts* for them if they are to enlist the enthusiasm they want to demonstrate. It is obviously the total effect they are after, just as a composer keeps his whole theme in mind while writing separate bars of a symphony. The lights, banners, uniforms, airplanes, marching, singing, and speaking at Nüremberg congresses all go to make up the experience of a *Parteitag* and to reinforce adoration of *Der Führer*.

In our discussion we have broken the program down into what we regarded as important characteristics engendering belief. This type of analysis could easily be extended further by showing how individuals have been conditioned to more specific items in the drama. But the extension of this method puts a false emphasis on the problem by assuming at once that a social stimulus is essentially a series of discrete elements to which people have somehow learned to react. The enormously important possibility which our approach so far has overlooked is that social stimulus situations have their own characteristic and unique qualities. These qualities inhere in the total pattern or configuration of the stimulus,

just as the characteristics of "triangularity" or "circularity" inhere in certain figures.

This broadcast of Martian invasion certainly had an "atmosphere" or structure all its own and the *methodological* device we have necessarily employed of describing one thing at a time should never obscure the fact that we are dealing with a situation *experienced as a unit*. For some persons, certain specific elements may have been more important in the total experience than others. The case studies show enormous variety. But no experience reported seems meaningful if entirely isolated from the whole context. The elementarism springs inevitably from the method of the investigation, not from the experience of the subject. If any one doubts this, let him reread the reactions reported at the beginning of the second chapter.

Tuning in Late

In spite of the realism of the broadcast, it would seem highly unlikely that any listener would take it seriously had he heard the announcements that were clearly made at the beginning of the hour. He might then have been excited, even frightened. But it would be an excitement based on the dramatic realism of the program. There would not be the intense feeling of personal involvement. He would know that the events were happening "out there" in the studio, not "right here" in his own state or his own county. In one instance a "correct" (esthetically detached or dramatic) standard of judgment would be used by the listener to interpret events. In another instance a "false" (realistic or news) standard of judgment would be employed.

The number of listeners who dialed to the program after the preliminary announcement may be approximated by information obtained in two separate investigations. The data from each of these studies furthermore amply demonstrate that the time a person tuned in was a major determinant in shaping his later reactions.

In a special survey conducted for the Columbia Broadcasting System (CBS) the week after the broadcast,³ interviews were made throughout the country on 920 persons who had listened to the broadcast. Among other questions asked were "At what part of the program did you tune in?" and "Did you realize it was a play or did you think it was a real news broadcast?" Forty-two per cent said they had tuned in late. And as Table 1 shows there was a very pronounced tendency for those who tuned in late to accept the broadcast as news, and for those who tuned in at the beginning to take it as a play. Only 12 per cent of the persons interviewed listened from the beginning and thought they were hearing a news report.

In the survey made by the American Institute of Public Opinion the question was asked "Did you listen from the beginning, or did you tune in after the program had begun?" Sixty-one per cent answered that they tuned in after the program had started, 35 per cent listened from the beginning, 4 per cent did not remember. As Table 2 shows, here again we find that those who tuned in late tended much more than others

³The writer wishes to thank the Columbia Broadcasting System for permission to analyze these data. Because of the time involved in making tabulations on the large number of cases, only half the sample was used (460 cases of the total 920). The sample was divided by the split-half method.

TABLE 1
TIME OF TUNING IN AND INTERPRETATION
(CBS SURVEY)

<i>Interpretation</i>	<i>Tuned in</i>		Total Number
	From the Beginning (per cent)	After Beginning (per cent)	
News	20	63	175
Play	80	37	285
Total per cent	100	100	—
Total number	269	191	460

to regard the broadcast as news. Only 4 per cent of the sample tuned in from the beginning and believed the broadcast to be a news report.⁴

Both of these studies lead to the same conclusion that tuning in late was a very essential condition for the arousal of a false standard of judgment. To be sure, many people recognized the broadcast as a play even though they tuned in late. Just why this was done and by whom will be discussed in the next chapter. But

⁴ The percentage of persons in the CBS sample who thought the broadcast was news is noticeably larger than that in the AIPO sample. The difference may be due to several conditions. For one thing, the CBS survey was made within a few days after the broadcast when respondents were well aware that many other people had been similarly fooled and when they might, therefore, have been more willing to confess their own mistakes. Furthermore, the AIPO sample represents the whole population; whereas the CBS interviewers, instructed to question any listeners they could find, were more likely to be attracted to people who were known to have listened because of their exciting experiences.

It will also be noticed that the CBS sample contained a much large proportion of persons who listened from the beginning. It is difficult to explain this difference in a satisfactory way. The people questioned by the AIPO interviewers may have forgotten the very beginning because of the more outstanding events which they remembered and which were reported later in the broadcast. The CBS survey was more rigorous and elaborate and would seem more accurate on this point.

TABLE 2
TIME OF TUNING IN AND INTERPRETATION
(AIPO SURVEY)

<i>Interpretation</i>	<i>Tuned in</i>		Total Number
	From the Beginning (per cent)	After Beginning (per cent)	
News	11	35	104
Play	89	65	267
Total per cent	100	100	—
Total number	134	237	371

for our present purposes it is important to raise and to answer the question of how anyone who tuned in at the beginning could have mistaken the clearly introduced play for a news broadcast.

Analysis of these cases reveals two main reasons why such a misinterpretation arose. In the first place, many people who tuned in to hear a play by the Mercury Theatre thought the regular dramatic program had been interrupted to give special news bulletins. The technique was not a new one after their experience with the radio reporting of the war crisis in October 1938. And it was a more usual procedure to accept such news reports as irrelevant to the expected program than as an integral part of it. Of the 54 persons in the CBS survey who listened from the beginning and thought the broadcast was a news report, 33 (61 per cent) said that the interruption seemed to them authentic. This is apparent from the comments:

“I have heard other programs interrupted in the same way for news broadcasts.”

"I believed Welles's statement that he was interrupting the program for a news flash."

"The news was presented in such an authentic manner."

The other major reason for the misunderstanding is the widespread habit of not paying attention to the first announcements of a program. Some people do not listen attentively to their radios until they are aware that something of particular interest is being broadcast. Since the beginning of the hour is concerned with station identifications and often with advertising, it is probably disregarded. About 10 per cent of the 54 people who misinterpreted the broadcast although they heard it from the beginning said they had paid no attention to the announcements. These people obviously just happened to be tuned to the Columbia station and were not, like the others who erred, anticipating the Mercury Theatre.

"My radio had been tuned to the station several hours. I heard loud talking and excitement and became interested."

"My radio was tuned to the station but I wasn't paying attention to it."

"We had company at home and were playing cards while the radio was turned on. I heard a news commentator interrupt the program but at first did not pay much attention to him."

"I started to listen only when the farmer began giving a description of the landing of the tube."

Anyone who studies the characteristics of radio knows that one of its chief shortcomings is its inflexibility as far as time is concerned. The listener must be at his dial at the right moment if he is to hear the

program. In this respect print obviously enjoys an enormous advantage.⁶ Newspapers, magazines and books can be read when it is convenient to read them, whereas a radio program exists for a few brief minutes and then disappears forever. The broadcaster can point out, however, that comparatively few people do much reading.

This disadvantage of radio has many practical consequences for the advertiser, the politician, or the educator. The advertiser does not want to send his expensive commercial announcement into an air thinned of potential customers. The clever politician does not want to waste his best oratory before he has attracted the greatest possible audience. The late Huey P. Long, well aware of the radio habits of his constituents, began one of his radio talks as follows: "Friends, this is Huey P. Long speaking. I have some important revelations to make but before I make them I want you to go to the phone and call up five of your friends and tell them to listen in. I'll just be talking along here for four or five minutes without saying anything special, so you go to the phone and tell your friends that Huey Long is on the air."

The great bulk of the latecomers consists of people who either turn their dials casually at the beginning of the hour trying to find something that pleases them or of people who intended to listen to a specific program when it began but misjudged the time. The CBS survey showed that two-thirds of those who had tuned in late did not know what program they wanted to hear as they turned their dials, while 12 per cent of the late-

⁶ cf. Paul Lazarsfeld, *op. cit.*

comers had actually intended to listen to the Orson Welles broadcast at the beginning.⁶

Tuning in late, then, is a normal aspect of the listening situation. But now we discover that tuning in late may lead to mass hysteria. Such a phenomenon is so far rare but might conceivably become important in times of crisis or national emergency. In such situations it may be necessary to use different techniques to give news or information, perhaps wording a report in such a way that late listeners could understand it without becoming frightened. This problem is important for our purposes now since we must discover why approximately 50 per cent—an unusually high proportion—of the listeners to this broadcast tuned in late, as the combined figures of the American Institute and the CBS surveys reported above seem to indicate.

The large percentage of listeners who tuned in on this special occasion after the program had begun seems chiefly due to two reasons. In the first place, it must be remembered that the Mercury Theatre program was competing with the most popular program of the week, that of the versatile, wooden hero, Charlie McCarthy. The regular weekly survey of Hooper, Inc., a commercial research organization checking on the audiences of programs, estimated the ratio of listeners to Orson Welles and Charlie McCarthy as 3.6 to 34.7. According to restricted "meter-checks" the average family listens 48 minutes out of the 60 minutes to the

⁶ On the other hand, if the listener has some favorite program to which he is faithful or if he is eager to hear a special broadcast, then he may frequently tune to the proper station early to make sure that he does not miss anything. If an educational program is followed directly by a popular variety show, it inevitably enlarges its audience during the last few minutes. If a program has the good fortune to precede a boxing match, it may double its audience.

Charlie McCarthy program. Since McCarthy and his stooge Bergen were the recognized features of this competing broadcast, it seemed probable that some people who did not listen throughout the whole hour would either turn off their radios when the dummy act was finished or would cruise around on the dial until they found something that interested them. If many persons did this, it is likely that they would misunderstand the nature of the Welles broadcast and keep their sets tuned to that program to learn more about the situation being so vividly described.

To check this possibility, 846 cards were sent to persons all over the country known to have listened to the Mercury Theatre broadcast. They were asked if at any time during the hour they had heard the Charlie McCarthy program and, if so, had they tuned out when Charlie McCarthy had finished his first act. Cards were returned by 518 persons. Eighteen per cent reported that they had heard the competing program and 62 per cent of these said they had tuned out when McCarthy had finished his first act and that they had then kept their dials set to Orson Welles. The excitement of the Martian invasion then apparently stopped the dials of about 12 per cent of Charlie McCarthy's devotees.

A second important reason for the increase in the number of late arrivals was the contagion the excitement created. People who were frightened or disturbed by the news often hastened to telephone friends or relatives. In the survey made by the American Institute of Public Opinion all people who tuned in late were asked "Did someone suggest that you tune in after the program had begun?" Twenty-one per cent said "Yes."