

THE "PHANTOM ANESTHETIST" OF MATTOON: A FIELD STUDY OF MASS HYSTERIA *

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THE story of the "phantom anesthetist" begins in Mattoon, Illinois, on the first night of September, 1944, when a woman reported to the police that someone had opened her bedroom window and sprayed her with a sickish sweet-smelling gas which partially paralyzed her legs and made her ill. Soon other cases with similar symptoms were reported, and the police organized a full-scale effort to catch the elusive "gasser." Some of the Mattoon citizens armed themselves with shot-guns and sat on their doorsteps to wait for him; some even claimed that they caught a glimpse of him and heard him pumping his spray gun. As the number of cases increased—as many as seven in one night—and the facilities of the local police seemed inadequate to the size of the task, the state police with radio-equipped squad cars were called in, and scientific crime detection experts went to work, analyzing stray rags for gaseous chemicals and checking the records of patients recently released from state institutions. Before long the "phantom anesthetist" of Mattoon had appeared in newspapers all over the United States, and Mattoon servicemen in New Guinea and India were writing home anxiously inquiring about their wives and mothers. After ten days of such excitement, when all

victims had recovered and no substantial clues had been found, the police began to talk of "imagination" and some of the newspapers ran columns on "mass hysteria"; the episode of the "phantom anesthetist" was over.

Journalistically the story died in a few weeks. In the police records the last attack was reported on September 12. Scientifically, however, the episode demands attention as a fascinating psychological phenomenon. Only one case of a "mental epidemic" has been reported in recent years: an outburst of hysterical twitching in a Louisiana high school was described by Schuler and Parenton (7). They were unable to find any reference in the standard sources to hysterical epidemics in the United States for over forty years, and they raise the question whether these phenomena are disappearing. The writer, therefore, undertook an investigation of the Mattoon case, with two general aims: (1) to preserve, for the sake of the record, an accurate account of the events, and (2) to attempt an analysis of the psychological factors involved in these events. The investigation consisted chiefly of an analysis of the records in the Police Department and interviews with those who reported physical symptoms from the gas. The study was begun in the middle of September and continued until the end of the year, but most of the interviewing was done in October. All the work was done by the writer, who assumes responsibility for this report.

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THE FACTS OF THE CASE

Mattoon is a small Illinois city, located about 50 miles southeast of the center of the state. The population, according to the 1940 census, was 15,827, of which 98 per cent were native-born white. It is surrounded by rather prosperous farm land, and its economy is largely determined by this fact. In addition, it is a junction for the Illinois Central and the New York Central railroads, both of which maintain repair shops at this point. There are a few small industries, a shoe factory, a furniture factory, Diesel engine works, a foundry, and the like. All in all it is a fairly typical midwestern city. As a result of the war it has enjoyed a mild boom, but not an upsetting one.

The outlines of the story can be quickly set down as a background for discussion of specific questions. On September 1 about midnight Mrs. A had a friend telephone the police that she and her daughter had been gassed. The police found no signs of an intruder, but Mr. A reported that, when he came home about two hours later, he saw a man run from the window. The police were called again, and again they found nothing. The next evening the *Mattoon Daily Journal-Gazette* carried a front-page story on the "gas attack" and a headline: "ANESTHETIC PROWLER ON LOOSE."

On the following day, Sunday the third, Mr. B reported to the police that he and his wife had had a similar occurrence. In the middle of the night of August 31—the night before Mrs. A's attack—he woke up sick, and retched, and asked his wife if the gas had been left on. When she woke up she was unable to walk. At first they had attributed these symptoms to hot dogs eaten the evening before. About the same time Mr. C, who works nights,

told the press that his wife and daughter had likewise been attacked. The daughter woke up coughing and, when Mrs. C got up to take care of her, she could hardly walk. They did not suspect gas until they read the papers next day. These two accounts appeared in the Mattoon paper on September 5, since no paper was printed on Sunday the third or Labor Day the fourth.

On the evening of September 5 two new attacks were recorded. Mrs. D came home with her husband about 10:30, picked up a cloth from the porch, smelled it, and reported that the fumes burned her mouth and lips so badly that they bled. Mr. E, who works nights, reported that his wife heard someone at the bedroom window, smelled gas, and was partially paralyzed by it.

On the sixth three more cases occurred, according to the police records. On the seventh, none; on the eighth, four; on the ninth, five; and on the tenth, seven. This apparently was the climax of the affair, for no cases were reported on the eleventh, only one on the twelfth, and none thereafter.

The symptoms reported were nausea and vomiting, palpitations, paralysis of the legs, dryness of the mouth and throat and, in one case at least, burns about the mouth. All cases recovered rapidly, hence there was little possibility for outside check on the symptoms. Four cases were seen by physicians, who diagnosed all cases as hysteria.

In at least three cases, so the testimony goes, the family dog "must have been gassed also" since he did not bark at the intruder.

Those who reported smelling the gas described it as "a musty smell," "sickish," "like gardenias," or "like cheap perfume." In some cases, though symptoms were reported, the gas was not smelled.

Police activity took several directions. Most important, probably, was the attempt to catch the "mad gasser" *in flagrante delicto*. The police answered all telephone calls as soon as possible and, when the state police came into the picture with modern radio equipment, were often able to surround a house, in the words of the Commissioner of Police, "before the phone was back on the hook." Despite all this and despite the amateur efforts of an excited citizenry no one was ever apprehended "in the act." Less direct procedures revolved around examination of a few objects found near houses where attacks had been reported, particularly chemical analysis of the cloth found by Mrs. D, and the usual round-up of suspicious characters. The results of these attempts were also negative. On the eleventh the Commissioner of Police put a note in the paper requesting that "roving bands of men and boys should disband," and that guns be put away "because some innocent person may get killed." About the same time the police adopted the policy of having the victims sent to a hospital for examination.

GAS OR HYSTERIA?

Obviously something extraordinary took place in Mattoon, and for its explanation two hypotheses have been advanced. The "gasser" hypothesis asserts that the symptoms were produced by a gas which was sprayed on the victims by some ingenious fiend who has been able to elude the police. This explanation was disseminated by newspapers throughout the country, at the beginning of the episode at least, and it is widely believed in Mattoon at present. The alternative hypothesis is that the symptoms were due to hysteria.

The evidence for the "gasser" hypothesis comes from the reports of the

victims concerning their symptoms, reports which are notoriously difficult to check. The fact that vomiting did occur was authenticated in a few cases by outside testimony but, since vomiting could be produced by gas or hysteria or dietary indiscretions, this fact is not crucial. There is plenty of evidence from the police and other observers that the victims were emotionally upset by their experiences, but this too is not a crucial point.

Another difficulty with the "gasser" hypothesis is the self-contradictory demands it makes on the gas. In order to produce effects of the kind reported when sprayed through a window it would have to be a very potent stable anesthetic with rapid action, and at the same time so unstable that it would not affect others in the same room. It would have to be strong enough to produce vomiting and paralysis, and yet leave no observable after-effects. Study of a standard source on anesthetics and war gases (3) and consultation with medical and chemical colleagues at the University of Illinois indicates that the existence of such a gas is highly improbable. Chemists are extremely skeptical of the possibility that such an extraordinary gas could be produced by some "mad genius" working in a basement.

Several people reported seeing a prowler who might be the "anesthetist." This too is not an important matter since prowlers have been reported to the police in Mattoon once or twice a week for several years. And, of course, prowlers do not produce paralysis or dry throats.

A minor weakness in the gas hypothesis is the lack of a motive. No money was stolen, and the circumstances were such that there would be little gratification for a peeper.

The best evidence for the hysteria

hypothesis is the nature of the symptoms and the fact that those cases seen by physicians—though there were only four—were diagnosed as hysteria. All symptoms reported are common in hysteria and can be found in the medical literature for many years back. For example, here is a description of a mild hysterical attack dated about a hundred years ago. Janet (4) quotes it from Briquet:

I choose, for an example, what happens to a woman somewhat impressionable who experiences a quick and lively emotion. She instantly feels a constriction at the epigastrium; experiences oppression, her heart palpitates, something rises in her throat and chokes her; in short, she feels in all her limbs a discomfort which causes them in a way to drop; or else it is an agitation, a necessity for movement, which causes a contraction of the muscles. This is indeed the exact model of the most common hysterical accident, of the most ordinary hysterical spasm. (pp. 376-377)

The hypothesis of hysteria accounts for the rapid recovery of all victims and the lack of after-effects. It explains why no "gasser" was found in spite of mobilization of local and state police and volunteers. It accounts for the fact that nothing was stolen and that dogs did not bark. The objections to the hypothesis of hysteria come from the victims themselves—quite naturally—and from others who do not realize the intensity and variety of effects which are produced by psychological forces.

Some who like compromises may argue that these two explanations are not exclusive, that there may have been a "gasser" at first even though the later spread of the symptoms was an hysterical phenomenon. The "anesthetist" soon become scared and ceased his fiendish activities. We may grant the charm of compromise as a general thing but insist that the above arguments still hold—for the first part of the episode as well as the last. The

hypothesis of hysteria fits all the evidence, without remainder.

QUANTITATIVE DATA ON CHRONOLOGY

If we consider the whole affair as a psychogenic one, as a "mental epidemic" due chiefly to suggestion, the sequence of events takes on a particular significance, and fortunately a more-or-less objective chronology of the case is furnished by records of telephone calls to the Police Department. In the Mattoon Police Department the desk sergeant regularly records the date and time of all calls and a brief note of the nature of the call and subsequent police action. From these records calls specifically reporting a "gassing" were easily segregated. Another category of calls, usually designated as "proowler calls" by the police, was found to be useful. This designation means that someone phoned and reported that a man was acting strangely on the street, or that noises were heard on the back porch, and that, when the police answered the call, they could find no evidence of any damage or break-in. The records were broken down in this way for the period of the excitement and a few weeks before and after.¹ Figure 1 shows the trends which appear when these data are grouped into weekly intervals.

The "gasser" curve starts from zero, reaches a peak rapidly, and rapidly returns to the baseline, as one would expect. (The decline is actually quite sharp, as noted earlier, though in the figure it appears more gradual than the rise because of the grouping into weekly intervals.) The "proowler" curve rises and falls with the "gasser" curve, a parallel which cannot be merely coincidental. Since the police do not list a call as a "proowler" call if they find evidence of damage or entry, it is likely

¹ The writer is very grateful to Sgt. Edward Davidson for carrying out a day-by-day analysis of these records.

that these calls result, in many cases at least, from psychological causes operating in a vague or ambiguous perceptual situation. Thus, during a period of great excitement like a manhunt, when anticipation is intense, the number of "proowler" calls would increase. Similarly, as the excitement subsides, the number of such calls would subside.

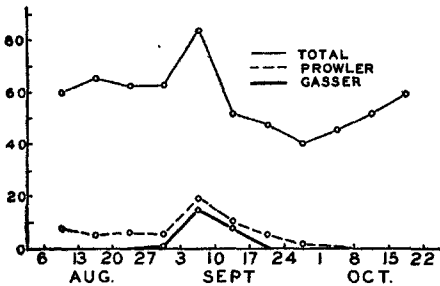


FIG. 1. ANALYSIS OF RECORDS OF TELEPHONE CALLS TO THE MATTOON POLICE DEPARTMENT

Gasser calls begin on September 2, increase rapidly, and decrease rapidly to zero. Prowler calls, which develop out of an unstructured situation, begin in this graph at their average level, rise with the excitement of the gasser episode, and fall to zero as contra-suggestibility develops. Total calls at the police station begin at the average level, rise with the increase in gasser activities, decline as contra-suggestibility develops, then return to the average level.

The most striking fact is that there were so few "prowler" calls in the last part of September and none whatever in October until just before Hallowe'en. This is very unusual, according to the police, and a check of the records for the same months in 1943 discloses no similar fluctuations. The only plausible explanation is that the lack of "prowler" calls results from the development of contra-suggestibility. After hearing of the "phantom anesthetist" and then of "imagination" and "hysteria," the people who ordinarily would have called the police when they heard a

suspicious noise became critical and inhibited their "imagination."

The curve for total calls is similar. Police business in general increased sharply during the "gasser" episode, then declined for a few weeks before coming back to normal.

In the light of the evidence presented thus far it seems proper to speak of a wave of excitement or a "mental epidemic" sweeping through Mattoon. The people who succumbed to the epidemic can be grouped into three classes according to the intensity of their response. In the first class are those who merely put off their evening stroll and locked their windows more carefully than usual. Such conduct would of course be called "sensible" and hardly requires any explanation, but it must be remembered that there were many in Mattoon—perhaps a majority—who completely ignored the incident. In the second class are those who reported to the police that they saw or heard a prowler. A report of this kind indicates a higher level of susceptibility since it means that suggestion enters into and complicates perception. The third class is made up of those who reported physical symptoms from "gassing." The occurrence of the physical symptoms indicates a high degree of suggestibility, on the average at least, and perhaps some constitutional predisposition to physical complaints as well.

AGENCIES OF COMMUNICATION

How was the suggestion carried to all these people so quickly and uniformly? There are three possibilities: direct face-to-face contact between victims, indirect conversation or gossip, and the newspapers. In talking to the victims the investigator attempted to determine when and how each had first heard of the "phantom anesthetist."

The replies gave very little evidence of face-to-face contact. With the exception of four cases in which two people lived together and were "attacked" at the same time it seems that the victims were practically unknown to each other. The possibility of indirect contact through neighborhood chatting is a more likely one, and one which is difficult to check. The chief argument against this avenue of communication is that it takes time, and the "epidemic" spread rapidly. The cases were widely scattered throughout the town, and, as we shall see later, only about a third of the victims had telephones.

As a means of communication the newspaper is, of course, the most effective. According to 1941 figures (9) 97 per cent of Mattoon families read the *Mattoon Daily Journal-Gazette* every evening except Sunday. This is the only paper with a large circulation in Mattoon, and obviously it is the source to which most residents would turn for information in a case of this kind. It is necessary, therefore, to examine the *Journal-Gazette's* treatment of the story and to analyze its psychological influence.

The *Mattoon Daily Journal-Gazette*, which usually runs to about eight pages, resembles other small newspapers both in size and in editorial policy. In general its treatment of the news is conservative, and one would expect that its readers have confidence in its reliability. No one would consider it a "sensational" paper. When a headline, "ANESTHETIC PROWLER ON LOOSE," appeared, therefore—as it did Saturday evening, September 2—it was no doubt taken at face value. The story, which ran on the front page in a full column headed "Mrs. (A) and Daughter First Victims," was written as a straightforward news item. Including the headline it covered 47

square inches.² In retrospect it makes rather interesting reading. The careful reader's eye is caught particularly by the word "First" in the heading, since only the one case is mentioned. Whether this was an instance of prophetic insight or merely an error is not known, but the word does now, and probably did then, arouse a tingle of anticipation.

On the next two days, Sunday and Labor Day, no paper was printed, but on Tuesday, the fifth, 26 square inches appeared on page six. On the sixth there were 40 square inches, including a headline, on the front page. On the seventh 29 square inches were used, including a headline, "MAD ANESTHETIST STRIKES AGAIN." No headline was used on the eighth and only 28 square inches of space. Objectively and in terms of newspaper space the excitement seemed to be dying down. But note the first paragraph:

Mattoon's "mad anesthetist" apparently took a respite from his maniacal forays Thursday night and while many terror stricken people were somewhat relieved they were inclined to hold their breath and wonder when and where he might strike next.

Several attacks were reported that night, and on the evening of the ninth a three-quarter-inch headline was used, crowding the war news to a secondary position. In all, the story took up 51 square inches of space. Evidently the climax is approaching. Up to this point the reader is treated to an absorbing horror story—with a mysterious marauder whose "maniacal forays" increase in a fantastic crescendo, a frightful new scientific device for gas-

² Measurement of newspaper space, as for our purposes, is not well standardized. In the present analysis the square inch is used, and the figures given include headlines and photographs as well as text. Those who like to think in terms of the column inch can halve these figures and get the length of a standard two-inch column which would contain the material.

sing the victims, and a succession of tantalizing clues. His interest may be aroused to the point where he participates in the manhunt—vicariously, through reading about the scientific investigations of the state crime-detection experts or trying out his own hunches, or actually, by following the police cars or patrolling the streets. In other cases it was not the thrill of the chase which was aroused but apprehension and fear. It was in these people that the hysterical symptoms appeared.

On the eleventh (the tenth was Sunday) the tone of the story changes. Although 62 square inches were given to the story, the headline contained the phrase "few real" and the treatment is critical. No headline was used on the twelfth and the keynote phrase was "hysteria abates"; the story took up 28 square inches. The next evening a comical twist is given to the affair, expanding it to 59 square inches about two false alarms which turned out to be a black cat and a doctor trying to break into his own office after he had forgotten his keys. On the fourteenth the account falls to 19 square inches, and next evening it is put back on page six with only 14 square inches, although a box of 10 square inches appeared on the front page telling how widely the story had been circulated.

The *Journal-Gazette* dropped the affair from this point to the twentieth, when an editorial was printed, apparently in reply to some ribbing by a Decatur paper. The editorial asserted that, although much of the excitement may have been due to hysteria, there really had been some odors in Mattoon—perhaps blown up from Decatur. With this epilogue the drama takes its leave from the columns of the Mattoon *Daily Journal-Gazette*.

Of the out-of-town newspapers the *Chicago Daily Tribune* and the *Chicago*

Daily News have the largest circulations in Mattoon, with coverages of 24 per cent and 20 per cent respectively (9). The *Tribune* started the story on the sixth with 10 square inches and gave it 20 to 30 square inches each day thereafter until the fifteenth. The editorial viewpoint of the story became skeptical about the twelfth. The *Daily News'* treatment was similar except that it ran photographs and did not question the authenticity of the "anesthetist." These papers have enough circulation in Mattoon to have an important influence but, since they came in late and since their readers read the local paper also, their influence was probably merely one of emphasis and reinforcement.

The *Chicago Herald-American*, though its coverage in Mattoon is only about 5 per cent (9), handled the story most thoroughly and most sensationally. Its text and photographs were often cited to the investigator. It started late—on the eighth—with 41 square inches, including a photograph. The opening paragraphs of the front-page story which appeared on the tenth are worth quoting.

Groggy as Londoners under protracted aerial blitzing, this town's bewildered citizens reeled today under the repeated attacks of a mad anesthetist who has sprayed a deadly nerve gas into 13 homes and has knocked out 27 victims.

Seventy others dashing to the area in response to the alarm, fell under the influence of the gas last night.

All skepticism has vanished and Mattoon grimly concedes it must fight haphazardly against a demented phantom adversary who has been seen only fleetingly and so far has evaded traps laid by city and state police and posses of townsmen.

By the eleventh the story was up to 71 square inches, including a 1½-inch headline: "STATE HUNTS GAS MADMAN." On the twelfth it was given 95 square inches, with pictures of crying babies on the front page. After

that the account becomes somewhat critical but continues to carry hints that the "gasser" may be a woman, or an apeman, and the like. On Sunday, the seventeenth, however, after the other papers had dropped the story, the *Herald-American* printed a long interview with a psychiatrist, Dr. Harold Hulburt, beginning at the top of the front page above the headline, and covering 196 square inches, with several photographs. This article discusses the dynamics of hysteria in general and includes some sympathetic conjectures regarding unconscious motives of Mrs. A. Further articles resulting from the interview with the psychiatrist appeared on the eighteenth and the twentieth. On December 3 *The American Weekly*, a Sunday supplement of the *Herald-American*, carried a full-page article by Donald Laird entitled "The Manhunt for Mr. Nobody."

The story was carried by the press services and was used or ignored by newspapers throughout the country according to their editorial policies. The *New York Times*, for instance, did not refer to it, while *PM* had 12 square inches on the seventh and 5 on the twelfth. The *Stars & Stripes* (London Edition) carried 7 square inches on the eleventh. Among the weeklies, *Newsweek* for September 18 carried 20 square inches, while *Time* for the same date carried 26. Both of these accounts were skeptical—*Time* was even sarcastic—but neither dared come to any definite conclusions. *Time* elevated the number of cases at the peak from seven to seventeen. *Dispatch*, a weekly of the Persian Gulf Command, gave it 13 square inches on the eighteenth.³

³ Radio treatment of the story was not considered important enough to warrant study. There is no radio station at Mattoon, and no one in Mattoon or elsewhere mentioned a radio account to the investigator. In general, radio editors treat these stories conservatively.

Striking evidence of the interest aroused by these accounts comes from the large number of letters and telegrams—estimated at about 300—which were received by Mattoon officials from all over the United States. The writer examined a sample of 30 of these and found half of them more-or-less sensible, though ill-informed, containing suggestions for capturing the "menace." The other half could be judged psychopathic—on the basis of ideas of self-reference, intensity of affect, and the combination of poor judgment with good vocabulary and expression. Paranoid trends were common.

CHARACTERISTICS OF THE SUSCEPTIBLE SAMPLE

Thus far in our investigation we have treated the Mattoon affair as a social phenomenon. The next question, and perhaps the most important, concerns the individuals in the affair. Why were some people susceptible while their nextdoor neighbors were not? Phrased in more workable form the question becomes one of finding differences between the susceptible sample and the rest of the population of Mattoon. The experimental literature on suggestibility and the clinical literature on hysteria offered several attractive hypotheses for check, but the nature of the case put a distinct limitation on the methods which could be used. It was apparent from the first few interviews that the victims, while they would talk about the "gassing," and their symptoms, and similar superficial matters, would not be willing to cooperate in any inquiry directed toward, for example, unconscious motivation. They had been victimized twice: once by the concatenation of factors, environmental and personal, which produced the symptoms, and later by publicity and gossip, which carried the implication

that people who have hysterical attacks are more peculiar, or less sincere, than their neighbors. For these reasons the best one could hope for was a description of the sample in respect of a few objective characteristics.

The 1940 Census Reports (8) give data on a number of characteristics of the Mattoon population; getting the same data for our sample would permit a comparison in these respects. Those characteristics were selected which seemed easy to verify and of possible significance for the present problem: age, sex, schooling, economic level, and occupation. Age was estimated and, in doubtful cases, checked by the estimates of acquaintances. To get a picture of the economic level of the sample four conveniences were used as indices: radio, mechanical refrigerator, electricity, and telephone. Percentages for the first three are given in the Census Reports. The number of residential telephones in Mattoon was kindly furnished by the manager of the local telephone agency, and the percentage computed in reference to the number of occupied dwelling units given in the Census Reports. The Census Bureau's descriptions of their occupational categories were studied before the interviewing began so that the necessary data could be obtained. For example, the Reports state specifically that railway brakemen are classed as "Operatives" while locomotive engineers and firemen are classed as "Craftsmen, Foremen and Kindred Workers." Furthermore in a small town like Mattoon the variety of jobs is limited and cross-checking is relatively easy. Hence placing the occupations of the sample into the Census Bureau's categories offered less difficulty than might be expected. A woman's occupation was used if she worked, otherwise her husband's. (Only two women had hus-

bands in military service. One of these worked, hence her own occupation was used. In the other case the husband had been inducted only recently so his civilian occupation was used.) All these data are brought together in Table 1 for comparison with similar data for the total population of Mattoon.

TABLE 1
THE SAMPLE OF "GASSER" VICTIMS COMPARED WITH THE TOTAL POPULATION OF MATTOON IN RESPECT TO CERTAIN OBJECTIVE CHARACTERISTICS

	PERCENTAGE OF SAMPLE	PERCENTAGE OF POPULATION
Sex		
Women	93	52
Age		
Below 10	0	14
10-19	0	18
20-29	37	17
30-39	16	15
40-49	21	13
50-59	16	10
60-69	10	7
Over 70	0	6
Education		
Grade school only	71	58
Some high school	29	32
Some college	0	10
Indices of Economic Level		
Electricity	80	95
Radio	80	91
Mechanical refrigerator	28	46
Telephone	33	60
Occupational Categories		
Professional and semi-professional	0	7
Proprietors, managers, and officials	16	13
Clerical, sales, and kindred workers	32	21
Craftsmen, foremen, and kindred workers	5	16
Operatives	37	24
Laborers, farm laborers, and farm foremen	10	5
Domestic service workers	0	5
Service workers, except domestic	0	9

Statistically speaking, the sample is small; the number of cases on which the percentages in Table 1 are based

varies from 14 for schooling to 29 for sex. The table includes, however, nearly all the cases in which physical symptoms were reported. The investigator checked police records and newspaper accounts for names and found a few others while interviewing. Two people could not be found at home despite repeated calls. Three had left town. One would not talk to the investigator. Some of the data on these were obtained from acquaintances. Table 1 gives us at least a partial description of the people who were most intensely affected by the excitement.

To begin with, the sample has a much greater proportion of women than the general population of the city. This is in agreement with the laboratory studies on suggestibility (1) and the clinical reports on hysteria (5, 6). All of the cases have been married but one, who was about twenty years old. As to the age data a word of explanation is necessary. In three cases mothers reported that their children had been "gassed." Since the investigator did not talk to the children apart from their mothers, these cases were eliminated. In two of these cases the mothers reported symptoms for themselves also, hence it is only the age data which are affected. Aside from the absence of children the most noticeable difference between the sample and the population is the surplus in the age group 20 to 29. The significance of this, if it is not accidental, is not obvious.

Since children are more suggestible than adults (1), why were there not more children in the sample? Many children probably did accept the suggestion in the sense that they reported to their parents that they saw the "gasser" or smelled the gas. While the dynamics of symptom-formation are not well understood and may be differ-

ent in each case, it does seem likely that adults would be more inclined to the withdrawing, incapacitating sort of symptoms which appeared in this "epidemic" than children. In the case reported by Schuler and Parenton (7) among high-school children the symptoms were of a more positive, lively nature.

In education the sample is below the total population. This too might have been predicted from the literature on suggestibility.

From the economic indices it seems clear that the sample is less prosperous than the population at large, at least in respect to these four conveniences. The investigator also classified the sample into the economic groups A, B, C, and D, according to a widely used scheme based on the location and appearance of the home, occupation, conveniences, and the like. (The investigator has had some experience in using this scheme in consumer research for the Psychological Corporation.) In terms of these categories the sample was about equally divided between the C and the D groups. There were two cases which could possibly have been put into the B group. It is noteworthy that no attacks occurred in either of Mattoon's two high-income areas.

Our sample, then, is characterized by low educational and economic level. These two characteristics go together in our culture. In a study similar in some respects to the present study Cantril (2) found that those people who were most strongly influenced by the Orson Welles 1938 broadcast, "War of the Worlds," were likewise of low educational and economic level. No doubt it is education which is more directly related to suggestibility. Cantril found that the better educated were more critical in that they made more and better outside checks on the authenticity of the broad-

cast and thus were less frequently panicked.

The data on occupation are not clear-cut since the categories used by the Census Bureau were not constructed for studies of this kind. As the number of cases on which good occupational data were available was only 19, the number in some categories was small, and some rearrangement was advisable. The category "Farmers and farm managers" was eliminated as there were none in the sample and less than 1 per cent in the general population. Professional and semi-professional classes were combined. "Laborers, except farm" was combined with "Farm laborers and farm foremen." The category "Proprietors, managers, and officials" is a broad one which could include a wide variety of people, hence it is of little use to us. The proprietors in our sample were proprietors of small shops and rooming houses.

As it stands Table 1 shows a lack of any professional or semi-professional people, which agrees with the data on educational level. A fairly clear-cut vertical comparison can be made if we consider the craftsmen and foremen as skilled workers, the operatives as semi-skilled, and the laborers as unskilled. The proportion of the sample in these three groups decreases—in comparison with the proportion in the population at large—as the amount of skill increases.

It is hard to account for the lack of service workers and domestic service workers in the sample. The susceptibility of domestics might be influenced by their living arrangements and by contact with their employers, who in general are in the educated, high-income group. As to the other service workers, one explanation is that police, firemen, and hospital workers were in a sense "on the inside." Also,

it is known that, while there has been little change in the Mattoon population in general since 1940, jobs connected with the servicing of automobiles have decreased considerably. But none of these "explanations" is very convincing.

The interviews, one can easily realize, were conducted under rather unfavorable conditions. It was not possible to get any insight into personality makeup of the victims except in a very superficial way. But it was possible usually for the investigator to work in a few general questions about the victim's health. In only fourteen cases was any information obtained in this way, but, of these, eight, or over half, replied with such phrases as "always been nervous," "never sleep much," and "doctoring for nerves." We have no control data for the total population, but the percentage does seem extraordinarily high. The interview data do not go far, but they reinforce the diagnosis of hysteria and show, as far as they go, that, extraordinary as the Mattoon affair may be on the surface, psychologically it follows a familiar pattern.

CONCLUSIONS

Analysis of records available at Mattoon together with the results of interviews with most of the victims leads to the conclusion that the case of the "phantom anesthetist" was entirely psychogenic. There is always the possibility of a prowler, of course, and it is quite likely that some sort of gas could be smelled at various times in Mattoon. But these things do not cause paralysis and palpitations. Hysteria does. The hypothesis of a marauder cannot be supported by any verifiable evidence. The hypothesis of hysteria, on the other hand, accounts for all the facts.

What, then, produced this mass hysteria? There are some gaps in the story, to be sure, but a fairly clear pic-

ture can now be drawn. Mrs. A had a mild hysterical attack, an event which is not at all uncommon, which is, on the contrary, familiar to most physicians. The crucial point is that her interpretation of her symptoms was rather dramatic—a quick look through any textbook (e.g., 5, 6) will convince any reader that hysterical symptoms usually are dramatic—arousing the interest of the press, with the result that an exciting uncritical story of the case appeared in the evening paper. As the news spread, other people reported similar symptoms, more exciting stories were written, and so the affair snowballed.

But such acute outbursts are necessarily self-limiting. The bizarre details which captured the public imagination at the beginning of the episode became rather ridiculous when studied more leisurely. The drama of the story lost its tang with time and the absurdities showed through. For example, the volatility of the gas, which was such an asset in penetrating physical barriers, became a liability when anyone tried to capture the gas and examine it. The facts seemed to evaporate as rapidly as the agent which produced them. At last the failure of the police and volunteers to find anyone or anything tangible (the best the news photographers could do was to pose women pointing at windows, babies crying, and men holding shotguns) combined with the statements of city officials in the paper produced a more critical public attitude. The attacks ceased. The critical attitude increased and spread, however;

police business struck a new low. It is proper to say that the wave of suggestibility in Mattoon left a wave of contra-suggestibility in its wake. Objective records document this generalization.

Naturally the more suggestible people accepted the story at face value. Of these only a small percentage reported physical symptoms from "gassing," presumably because of some personal motivation toward, or gratification from, such symptoms. As might be predicted from psychological and psychiatric literature, those who succumbed to the "mental epidemic" were mostly women and were, on the average, below the general population in educational and economic level. This supports the above analysis and puts the "phantom anesthetist" of Mattoon, in some aspects at least, into a familiar psychological pattern.

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