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"A Message in a Bottle:" Confounds in Deciphering the Ramey Memo from the Roswell UFO Case

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Abstract—Previous analyses of a photograph showing a document held by General Ramey from the Roswell UFO case reportedly revealed content that supported a crashed extraterrestrial craft scenario. Other investigators of this document suggested, however, that it was ambiguous stimuli being interpreted by pro-Roswell investigators in accordance with their expectations. To assess the possible extent of bias in these interpretations, we had three randomly assigned groups of participants attempt to decipher the document under different suggestion conditions: one condition in which we told participants (N = 59)they were looking at a document pertaining to the famous Roswell UFO case, a second condition in which we told participants (N = 58) that they were looking at a document pertaining to secret testing of the atomic bomb, and a final condition in which participants (N = 59) were told nothing about the possible content of the document. Many participants indeed claimed to be able to read the document, although their subsequent solutions appeared to follow directly from the experimental suggestions. Moreover, the number of words deciphered was related to participants' ages, tolerance of ambiguity, and relative exposure to the UFO field and especially the Roswell case. However, a few words in the same locations in the document were consistently perceived across the three suggestion conditions and these matched the words identified in previous investigations. We conclude therefore that future research of Ramey memo might be potentially informative if certain methodological criteria are established. Such protocols are outlined.

Keywords: Roswell — Ramey memo — ambiguous stimuli — suggestion and expectation — UFOs

Introduction

It would seem that nearly everyone has heard about some aspect of the famed "Roswell Incident" of 1947. A plethora of popular books has been published

within the past decade on this alleged UFO crash (Berlitz & Moore, 1980; Friedman & Berliner, 1992; Pflock, 2001; Randle, 2000; Randle & Schmitt, 1991, 1994), the military has offered at least two published explanations (McAndrew, 1997; McAndrew & Weaver, 1994), a Showtime movie and the *Unsolved Mysteries* program have focused on the case, a host of Internet websites have exploded onto the scene, and there was international media coverage of the recent 50th anniversary of the event. There is even a television series on the Warner-Brothers Network devoted to the survival of the Roswell "aliens." It is a UFO case that has reached such mythic proportions in our popular culture that some regard it as a contemporary but deep-seated urban legend.

Consistent with this notion, some established investigators (e.g., Jeffrey, 1998; Pflock, 2001) propose that the evidence cited in support of an extraterrestrial aspect to Roswell is the equivalent of folklore and that the government's most recent explanations for the reported debris and existing witness reports firmly solve the case. However, other ufologists have published peer-reviewed criticisms of Jeffrey's arguments and the official explanations (e.g., Randle, 2001; Swords, 1998; Woods, 1998). As a result several investigators continue to pursue new discoveries that it is hoped will shed some light on what crashed near Roswell, New Mexico. Contemporary efforts have ranged from attempting to corroborate anecdotal reports and conducting forensic analyses of witness testimony (Houran & Porter, 1998, 1999) to searching for objective evidence, such as finding crash material from archaeological surveys of the debris field and the more popular approach of trying to uncover official documents that discuss the event and the nature of the crash debris.

Unfortunately, there are very few known documents that relate directly to the Roswell case. First, there are newspaper reports published in July 1947, but these are often filled with mistakes. For example, Walter Haut (who prepared the original press release announcing the military's recovery of a flying disc) is identified as Warren Haught in many of the stories (New York Times, July 9, p. 1). A telex was sent by the FBI office in Dallas that suggested, on one hand, that the object recovered was a balloon, but that also stated, "that telephonic conversation between their office [Fort Worth Army Air Field intelligence] and Wright Field [later Wright-Patterson Air Force Base] had not borne out this belief" (Davis, 1995, p. 14; Randle, 2000, p. 116). Finally, in 1995, the Government Accounting Office (GAO) queried a number of government agencies including the FBI, the CIA, the NSA, and the Air Force, concerning documentation. The GAO wrote, "Our search for government records concerning the Roswell crash yielded two records originating in 1947—a July 1947 history report by the combined 509th Bomb Group and RAAF [Roswell Army Air Field] and an FBI teletype message dated July 8, 1947. The 509th-RAAF report noted the recovery of a 'flying disc' that was later determined by military officials to be a radar-tracking balloon. The FBI message stated that the military had reported that an object resembling a high-altitude weather balloon



Fig. 1. Brigadier General Roger M. Ramey (left), Commanding Officer of the Eighth Air Force, is photographed near the remains of a weather balloon and Rawin radar target on July 8, 1947. In his hand is a document on which some words seem to be visible. Sitting in the background is Colonel Thomas J. DuBose (right), the Chief of Staff of the Eighth Air Force. Courtesy Fort Worth-Star Telegram Photograph Collection, The University of Texas at Arlington Libraries.

with a radar reflector had been recovered near Roswell" (Davis, 1995, p. 2). Readers are referred to *The Roswell Encyclopedia* (Randle, 2000) for an overview of the case, these known documents, and purportedly new evidence.

The Ramey Memo

One example of newly discovered evidence that apparently conflicts with the military's official explanations is the "Ramey memo." During the photo session of the reported weather balloon brought to Fort Worth, Texas to the Fort Worth Army Air Field [later Carswell Air Force Base] from Roswell on July 8, 1947, a picture was taken of Brigadier General Roger M. Ramey crouched by some of the scattered debris from a Rawin radar target (Berlitz & Moore, 1980; Friedman & Berliner, 1992; Johnson, 1947; Schmitt & Randle, 1991). In that photograph (Figure 1), Ramey is holding a piece of paper that has slight discoloration, suggesting words or text that might be read with sufficient magnification. Although the paper is not facing the camera straight on, the angle of tilt is not that large; hence, words on the paper could conceivably be read (Randle & Schmitt, 1991; Figure 2). This possibility was regarded by investigators as a potentially significant lead in the case, given that few known documents relate to the Roswell incident.

In 1991, Don Schmitt sent a copy of that photograph to Dr. Richard Haines, a former NASA research scientist, asking if he could read anything on the paper. Haines scanned the message with a microscope and reported that he

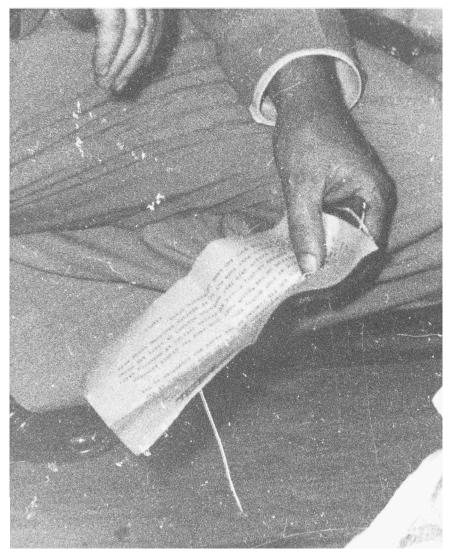


Fig. 2. Close up of the memo section of the photograph of Brigadier General Roger M. Ramey. Courtesy Fort Worth-Star Telegram Photograph Collection, The University of Texas at Arlington Libraries.

could see vague words but could not make out any individual letters. In a few cases, he could identify a random letter but that was no help in understanding what might be printed on the paper. Haines (1991) thought that a better quality, or an enlargement, of the letter area of the photograph might reveal more of the message, but did not seem to think it would be of much real use. Representatives of the US government echoed Haines' basic assessment. According to Weaver and McAndrews (1994), "It was noted that in the two photos of Ramey

he had a piece of paper in his hand. In one, it was folded over so that nothing could be seen. In the second, however, there appears to be text printed on the paper. In an attempt to read this text to determine if it could shed any further light on locating documents relating to this matter, the photo was sent to a national level organization for digitizing and subsequent photo interpretation and analysis ... This organization reported on July 20, 1994, that even after digitizing, the photos were of insufficient quality to visualize ... details sought for analysis" (p. 21).

That was where the matter rested until 1998 when J. Bond Johnson, who had taken six of the seven photographs in General Ramey's office (Randle, 2000), decided to investigate further. Johnson assembled a team to inspect the photographs that included Ron Regehr, a space and satellite engineer (Johnson, 1998). Using a large blow-up of the photograph, a computer, and a variety of software and camera equipment, Johnson's team reported to see more of the message that Ramey held. Their interpretation of the message was:

AS THE ... 4 HRS THE VICTIMS OF THE ... AT FORT WORTH, TEX ... THE "CRASH" STORY ... FOR 0984 ACKNOWLEDGES ... EMERGENCY POWERS ARE NEEDED SITE TWO SW OF MAGDALENA, NMEX ... SAFE TALK ... FOR MEANING OF STORY AND MISSION ... WEATHER BALLOONS SENT ON THE ... AND LAND ... rOVER CREWS ... [SIGNED] ... TEMPLE. (Johnson, 1998)

If what they found was accurate, and others could corroborate what they had seen, then it was a breakthrough on the Roswell case. Here was a document with an indisputable provenance. General Ramey was holding it in his hand, and copies of the photograph put out over soundphoto wire provided a time and a date for further authentication. According to a copy of the photograph that came from the Bettmann Photo Archives in New York City, J. Bond Johnson had taken the picture on July 8, 1947, and it had been transmitted at 11:59 P.M., or one minute before midnight (Randle, 2000; Randle & Schmitt, 1994; Schmitt & Randle, 1991).

There were some major gaps in what Johnson's team could read, and some of the phrases they deciphered made little sense in the context of what else could be seen. However, the specific references to "victims," to "weather balloons," and to "Magdalena, New Mexico," were important clues. These words seemed to tie the message to the Roswell events, and suggested that some kind of a quick response was required by the military, either at the Eighth Air Force headquarters in Fort Worth, or by the 509th Bomb Group in Roswell. Others began to request copies of the pictures from the Special Collections in Texas. They brought their expertise to bear on the Ramey memo (Burleson, 2000; Carey, 2000; Randle, 2000). To the delight of many Roswell supporters, other investigators also reported seeing letters, words and images, as suggested by Johnson and his team. The problem was that many of those doing the work were not seeing the same things as Johnson had claimed.

Neil Morris, a technician who works for the University of Manchester in

England, and who is part of the Johnson "Roswell Photo Interpretation Team (RPIT)," began to work on the message as well. He made a significant methodological improvement that benefited all researchers, namely, he broke down the message line by line so that it would be easy to follow his interpretation of the message. He used capital letters to represent the parts of the message of which he was sure, lower case letters to represent his best guess at some letters, an asterisk to denote a letter he could not decipher, and a dash where there was little more than a smudge on the message. Morris' interpretation was not an exact match for what Johnson had released, and in fact, it suggested new directions in the case. In the new version, while the words "victims" and "Fort Worth, Texas" remained, nearly everything else was different. One of the major points in the Johnson version was the wording that suggested, "Emergency Powers are needed Site Two SW of Magdalena, Nmex. (Morris, 1998)."

John Kirby, a researcher who is interested in the Roswell case, and who works for an established company in the computer field, also examined the message. Despite his expertise and equipment, he was unable to see much of anything in the document. He did agree that on the third line were the words, "At Fort Worth, Tex." The second line, which many consider the critical line, said, according to Kirby, "are the remains of the material you commanded we fly." By changing the word "victims" to "remains," the nature of the entire message was altered (Kirby, 1999). In still a different version, David Rudiak, another careful researcher who is interested in the Roswell case, suggested only a little of what others had seen.

Those were not, of course, the only alternative interpretations that were offered. Russ Estes, using a 16 · 20 print made by the University of Texas Library, applied his expertise to the examination. Estes, a professional documentarian, was able to use a professional quality \$50,000 video camera with a high-quality macro lens to capture the image. Then using his computer and a variety of technically complex and professional quality software programs, he examined the message in a myriad of ways, including with a jeweler's loupe, a magnifying glass and a microscope. Estes also scanned it at 9000 dpi so that it created a file that was 1.7 gigabits in size and could be manipulated and enlarged even further (Estes, 1998). Despite these preparations, Estes reported that he could not reliably decipher any of the text in the Ramey memo. Pressed on the point, because others reported being able to decipher many words and phrases, Estes did say that he could make a "best guess" about the images on the message. After examining an 8 x 10 enlarged photograph of just the message area via the same techniques and equipment, Estes stated that he perceived the words "Fort Work, Tex" with a limited amount of confidence. On the line below, where one group deciphered "Disk" and another group deciphered "ELSE," Estes believed he saw "ELA*." He added that this made no sense to him, just that was what the ambiguous smudges that everyone was attempting to make into words looked like to him (Estes, 1998). As for the signature block, he could see nothing that resembled either of the claims. At best,

there might have been an "M" in the middle of the word, and the possibility of an "LE" at the end. That gave the nod to "Temple" but Estes (1998) said investigators were seeing the equivalent of "faces in the clouds."

Schmitt and Tom Carey from Pennsylvania and Don Burleson of Roswell came up with their own interpretation of the message, at least, according to Burleson. Burleson, writing in the January 7, 2000, issue of *Vision*, a monthly magazine published by the *Roswell Daily Record*, noted, "A number of attempts have been made to read the Ramey letter. Quite frankly, most of these attempts are amateurish, and even some ufologists have concluded that there is nothing in the Ramey image that advances the case for the Roswell incident. They are MISTAKEN. (Burleson, 2000; Randle, 2000)."

Burleson stated that he had spent a year working on deciphering the letter. He claimed that he had the advantages of being the director of a computer lab and a background in cryptanalysis. According to him, "I'm quite used to reading things that I wasn't meant to read (Burleson, 2000)." Burleson wrote that he had been using several excellent computer image enhancement software packages, "including LUCIS, the most advanced software used today in such fields as microscopy (Burleson, 2000)." However, it is accepted that the Ramey memo is not an encrypted message, but a plain text message. Therefore, cryptanalysis seems to offer little of real importance in trying to decipher what is printed on the paper.

Interestingly, the interpretation of the message, as given by Burleson, and credited to Schmitt and Carey, does not agree with what Carey now suggests. In a publicly posted e-mail dated March 29, 2000, Carey suggested first that the "take" on the Ramey memo is that of Carey and Schmitt and not "Burlson (sic) or anyone else ... All of us continue to work on the memo as best we can, so there will no doubt be more to say in the future (Carey, 2000)." Given Carey's objection to what Burleson had written in the *Roswell Daily Record*, and given that Burleson seemed to believe that his interpretation was the only one to make sense while the others were "amateurish," what does this say about the credibility of these attempts to read the document held by Ramey? Estes' suggestion of "faces in the clouds" begins to carry some credence, as those who seem to have a specific agenda are seeing in the memo exactly what they expect (Randle, 2000).

This opinion has been expressed by some of the others who are attempting to understand the Roswell case. UFOlogist Stanton Friedman contacted Rob Belyea, the owner of ProLab, asking him to examine high-resolution scans made of the negative. Friedman had actually paid someone in Fort Worth to hand carry the original negatives from the Special Collections to a computer lab to have these scans made. The results were then sent on to Friedman who supplied them to Belyea. Belyea said that he could not spend hours examining the message but that he could rule out or confirm the interpretations made by others by using his software to decide on character count and combinations of letters (Dull, 1998). It was not at all unlike the work being done by Russ Estes

in California, though Estes was actually trying to read the message rather than just confirm other interpretations. While Friedman stood on the sidelines watching and not commenting on the research, Belyea did say specifically that he could *not* see "Magdalena" in the text as the Johnson team had suggested. Belyea did say, "They're pulling off all sorts of [readings], but they're making some of it up" (Dull, 1998).

Estes pointed out, as did others, that the message was a teletype rather than something from a typewriter. Given that, the message would have had to be in all capital letters, and nearly everyone agreed, because the teletype machines of that era had no capability for lower case letters (Estes, 1998). That was an important point in trying to understand and to interpret what was on the paper held by Ramey. There is an additional problem, only partially addressed in the search of the message. This apparently was a military message sent from one military installation to another, which means there should have been some military jargon in it. The attempts at reading it have failed to account for any military jargon. The closest is Rudiak's attempt to place military unit designations into the message. He noted in one place where he thought 58 or 58th bomber squadron might have been indicated. He also located a second place where 54th SAID could indicate some kind of a military unit, although no one has yet located a unit with that designation (Rudiak, 2000). Rudiak also noted that what he thought as "5 PM" made no sense because the military would have used the twenty-four hour clock and it would have said, "1700 Hrs" rather than "5 PM" (Rudiak, 2000). That is a valid point.

This leads to another point that has not been covered. In the vast majority of message traffic on teletypes from that era there are no punctuation marks. Instead, these marks were abbreviated as words. For example, rather than use a comma, the term CMA was used. A period was PD. None of the interpretations account for these sorts of things, and that could be complicating the interpretations of the message. In none of the various interpretations of the message has anyone suggested that some of the words might actually be the abbreviations for punctuation marks.

And there is an even more important point. Nearly everyone agrees that Roswell-related message traffic would have been classified, particularly if the event involved the crash of an extraterrestrial craft (Randle, 2000). Therefore, it is interesting that no one had suggested that classification markings are missing from the document. The placement of classification stamps is governed by Army regulation 380-5 [civilian classification regulations are in 5200.1] and requires that they are on both the *top and bottom* of each page and reflect the highest classification of the information in the document. That means that while some information might only be classified as 'confidential,' or might in fact be 'unclassified,' the whole document is classified at the highest level of information contained therein. Consequently, whether Ramey received it, or transmitted it, there should be a classification stamp at the top and the bottom of the sheet. Messages are not allowed out of the communications center without the

proper markings on them. If those marking are not present, it means that the document is not classified, and therefore, is not very important, at least in attempting to understand the Roswell case. Further, if this is Ramey's draft of the message, to be transmitted, the classification markings should still be present. But, more importantly, that message would have been created on a regular typewriter and not a teletype machine. If that is the case, then there is no reason for it to be typed in all capital letters and the interpretations are suddenly changed.

In fact, it seems strange that Ramey, a general officer who had handled classified material long before this event, would be so cavalier in handling this message. Before crouching by the wrecked weather balloon and radar target in his office, had he held a classified message, he would have given it to his aide, he would have set it in his desk drawer, or he would have had it locked in the safe by his secretary. That is the proper way to handle classified material, and Ramey would not have likely made such an elementary mistake, especially with a camera and a reporter in his office.

There is now a final complication with the Ramey memo. Johnson, according to some, claims that he himself handed the message to Ramey (Balthaser, 2001). That confuses the source of the document that Ramey is holding, e.g., did Johnson bring it into the office with him? Johnson said that he had received, from his boss at the Fort Worth *Star-Telegram*, an Associated Press wire story about the debris coming from Roswell (Balthaser, 2001). This would mean that the memo being held could relate to the Roswell Incident, that it would be a document from a civilian source, but that it would contain nothing to establish the reality of a UFO crash. Of course, it must be understood that Johnson has altered this new statement slightly (Balthaser, 2001). We also note that Johnson's retelling of the events in General Ramey's office has undergone considerable evolution from his first interviews conducted in 1989 (Randle, 2000; Schmitt & Randle, 1991; Shandera & Moore, 1990).

There is currently no consensus on either the source or content of the message. One researcher, a champion of the Roswell case, said that it had to be assumed that the message had something to do with the Roswell case because Ramey is holding it while Johnson is taking his picture (Carey, 1998). There really is no reason now to make that assumption. The message could be about almost anything, could be from almost anywhere, and the words and images being seen might be a reflection of what the researcher wanted to see rather than what is actually there.

The Present Research

The lead author has been interested in researching variables that guide people's interpretation of ambiguous stimuli (e.g., Houran, 1997, 2000; Houran & Williams, 1998; Lange & Houran, 1998, 1999b). The Ramey memo is inherently ambiguous, because it is encased in a metaphorical "bottle," i.e., there are filters that limit analysis and consensual understanding of the document. No one can deny that biases and errors have crept into previous studies of the

memo; otherwise analysis and interpretation of the document would be a straightforward task with a clear consensus of its contents. However, as we have discussed above, even hardened researchers of the memo do not fully agree on its contents. Therefore, the present study was designed to estimate the degree of bias that suggestion and expectation have played in previous interpretations of the memo. Such findings would be helpful for determining whether more refined analyses of the memo are needed, as well as what type of research design for deciphering the memo would promote maximum reliability, objectivity, and meaningfulness.

Towards this end, we conducted three related studies in which we asked self-selected participants to decipher the Ramey memo (see Figure 1) under one of three possible suggestion conditions: one condition involved telling participants about the famous Roswell Incident of 1947 and then suggesting that the memo might provide information about a government cover-up (Study I); a second condition involved telling participants that the memo provided information about the testing of the atomic bomb (Study II); and a third condition involved no suggestions to the participants (i.e., volunteers were "blind" with respect to expectations about the possible content of the document: Study III). We expected that each suggestion condition would elicit significant differences in the participants' interpretations. However, we were also interested to see whether there was any agreement on the identity of words in the same location in the document, irrespective of suggestion condition. We made no predictions about this aspect of the study.

Materials and Procedure

Participants

The lead author enlisted the help of two research assistants to compile a test pool composed of ideally 300 people for a study that generally aimed to "determine how much information people could read on an old photograph of a document." Only 176 people were recruited (mean(M)) age = 37.4 yrs., SD = 9.8, range = 18–68 yrs., 93 men, 83 women), and we randomly assigned these participants into one of the three suggestion conditions. There were no statistically significant differences in age among the three groups. The protocol for the three experimental conditions is outlined below.

Study I: a convenience sample of 59 participants who were asked to "carefully study and try to read the contents of a photograph of a military memo that could contain information about the crash, retrieval, and subsequent cover-up of an extraterrestrial craft near Roswell, New Mexico in July of 1947."

Study II: a convenience sample of 58 participants who were asked to "carefully study and try to read the contents of a photograph of a military memo that could contain information about the secret testing of the atomic bomb."

Study III: a convenience sample of 59 participants who were asked to "carefully study and try to read the contents of a photograph of a document."

Ramey memo: Raw Data

Participants viewed an 8" \cdot 10" enlarged print of the message part of the Ramey memo (from the collection of Kevin D. Randle) obtained from the Fort Worth Star-Telegram Photograph Collection (University of Texas at Arlington Libraries), and the contents of Stanton Friedman's CD-ROM data. To the best of our knowledge, Friedman's scans are the best available raw data². This CD contains four state-of-the-art scans of the memo portion of the photograph where the text is visible. Specifically, participants viewed four high-resolution images: (1) a negative of the memo portion of the Fort Worth Star-Telegram photograph, (2) an $8 \cdot 10$ enlargement of the memo area made by University of Texas at Arlington for Stanton Friedman, (3) a 20-year-old $8 \cdot 10$ (memo portion) before the original negative had been handled so much, and (4) an $11 \cdot 14$ (memo portion) made earlier in 1998.

Interested readers may see images of the Ramey memo on the Internet courtesy of Neil Morris: http://www.adm2.ph.man.ac.uk/ftw-pics/index/htm.

The Deciphering Task

Each participant was briefed about the purpose of the study in accordance with their respective suggestion condition, and then was seated individually in a quiet room. There the participant viewed an 8" · 10" enlarged print of the message part of the Ramey memo (from the collection of Kevin D. Randle) obtained from the Fort Worth Star-Telegram Photograph Collection (University of Texas at Arlington Libraries), as well as Friedman's CD-ROM computer displays of the message. We provided participants with a magnifying glass to aid them in viewing the material. A research assistant blind to our goals and hypotheses was available in the test room to assist participants in manipulating the images from the CD-ROM. Participants viewed the CD-ROM images on a 17-inch computer monitor at 800 x 600 screen resolution. Participants were instructed to write down line by line what they perceived (either individual characters or full words) in the 10-line block of text on a score sheet, thereby replicating the system pioneered by earlier researchers (see Table 1). No time limit to complete the deciphering task was imposed on the participants. Our research assistants immediately aggregated the responses into a computerized database.

Self-Report Measures

After the deciphering task, the research assistant requested that the participant complete a short questionnaire. Included were two instruments. First was Lange and Houran's (1999a) Rasch version of the AT-20 (MacDonald, 1970) measure of tolerance of ambiguity. This is a 20-item "yes/no" scale in which high scores reflect greater tolerance of ambiguity. Sample response items are "A problem has little attraction to me if I don't think it has a solution," and "Vague and impressionistic pictures really have little appeal for me." Even

TABLE 1
Comparison of the Various Interpretations of the Ramey Memo

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(M) (2)
(M) (3)*** AT FORT WORTH, Txe. (R) (3)EaM At FORT WORTH, TEX. (B) (3) TEAM AT FORT WORTH, TEX. (C) (3) AT FORT WORTH, TEX. (K) (3) AT FORT WORTH, TEX. (A) (3) AT FORT WORTH
(M) (4)***S** smi Ths *ELSE****** unus-d**e T&E A3ea96 L****** (MII) (4) W-S-SorTei-ethAT - ONUS raaf T&E A#-9Landparty (R) (4)5 pM THE "DISC" they will ship [swap?] FOR A3 8th Arrived. (RII) (4) THE "DISC" THEY will ship FOR A3-AS2 Arrived (B) (4) () ON THE "DISK" MUST HAVE SENT LOS ALAMOS ADVANCED () (C) (4) SSOR ON THE "DISK" MUST THUS SAVE FOR THE ATOMIC LABORATORY (A) (4) DISK or DISC
(M) (5)SO ught CRASHE s pOw*** *** N***** SITEOne IS reMotely ***** (R) (5)or 58t(h) bom(be)r sq(?) Assit [Assess] offices? AT ROSwe(ll) AS for (RII) (5) BY B-29 ST OR C47. WRIGHT AF ASSIST FLIGHTS AT ROSWELL. ASSURE (B) (5) URGENT. POWERS ARE NEEDED SITE TWO AT CARLSBAD, NMEX. (C) (5) URGENT POWERS ARE NEEDED SITE TWO NW ROSWELL, NMEX.
(M) (6)***D* bAsE ToLd ***a* for we**ous BY STORY are 8***** (MII) (6) MIDDAY 509# TOLD newsPaPer segment of STORY Adv (R) (6)54th SAID MIStaken[meaning? weather? balloon?] of [is] story And said (RII) (6) THAT CIC-TEAM SAID THIS MISTAKEN MEANING OF STORY AND THINK (B) (6) SAFE TALK NEWSPAPER MEANING OF STORY AND (C) (6) SAFE TALK WANTED FOR MEANING OF STORY AND
(M) (7)lly thry even PUT FOR BY WEATHER BALLOONS n*d** were (MII) (7) LLY ThrY EVEN PUT for AF WEA TA TN BALLOONS raDar W ERE (R) (7) news [clip, chat, dirt] out is OF WEATHER BALLOONS which were (RII) (7) LATE TODAY NEXT SENT OUT PR OF WEATHER BALLOONS WOULD WORK (B) (7) ONLY SHOW ()() BY WEATHER BALLOONS () WAVE ()() (C) (7) MISSION [OR OBJECTIVE] NEXT CREW OUT TODAY WEATHER BALLOONS (A) (7) WEATHER BALLOONS

TABLE 1 Continued

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(MII) (8)
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(R) (8)---- Add [And, Ask] land d-----[dirt cover?] crews.
             BETTER IF THEY ADD LAND DEMO RAWIN CREWS
(RII) (8)
(B) (8) L - DENVER CREWS
(C) (8) 509 HAS LAND SURVEYOR CREWS
(A)(8)
              LAND
Line (9) is blank.
(M)(10)
           Temple
(R)(10)
           rAMEy
(RII) (10)
           RAMEY
             TEMPLE
(B) (10)
(C)(10)
           RRAMEY
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Note: M = Neil Morris; MII = Neil Morris (in a later review); R = David Rudiak; RII = David Rudiak (in a later review); B = Don Burleson; C = Tom Carey; K = John Kirby; (A) = Agreement (A majority of those contributing to the research saw the same basic structure. Capital letters and words in all capital letters are those that the interpreter believes to be accurate. Lower case letters suggest a best guess. All four have shared information as they attempted to decipher the message. No explanation of some phrases has been offered. "Safe talk" is not a known military phrase. Burleson and Carey have worked together on this project, though their interpretations differ. Information assembled by Don Burleson, Tom Carey, George Filer, John Kirby, Kevin Randle and David Rudiak. A significant portion of this data was reported by George Filer in his Filer Files of October 31, 2000.

though tolerance of ambiguity may be conceptualized as a perceptual-personality variable on a continuum, we dichotomized scores (either low or high tolerance of ambiguity) based on the Rasch mean given by Lange and Houran (1999a). We dichotomized scores because both low and high levels of tolerance of ambiguity can lead to magical thinking and a belief in extraordinary phenomena (Houran & Williams, 1998; Lange & Houran, 1998, 1999b). Second, participants completed a study-specific (i.e., specially constructed) index of prior exposure/ knowledge of the Roswell case and the Ramey memo (see Appendix). The lead author constructed the items for this scale based on face validity.

De-Briefing of Participants

After the deciphering task was completed, each participant was informed of the full purpose of the study. This involved a detailed explanation of the photographic data, the context of the photographs, and an overview of the current debate about its contents. In addition, we provided participants with a photocopy of the entry on the "Ramey Message" from Randle's (2000, pp. 293–306) *The Roswell Encyclopedia*.

	1.	2.	3.	4.	5.	6.
1. Age	_					
2. Gender ^a		_				
Tolerance of						
ambiguity ^b	.27*	.14*	_			
4. Intolerance of						
ambiguity ^c	10*	18*	_	_		
5. UFO—Roswell						
scale	.08	12*	.03	.05	_	
6. Number of words						
deciphered	.11*	.15	.66**	.78**	.35*	_

TABLE 2
Spearman Rank-Order Correlations Between Measures in Study

Results

Group Differences

The Ramey memo is very difficult to read even under the best conditions and with the most sophisticated technology. Therefore, it is not surprising that our participants who examined the document relatively briefly and without great motivation were unable to decipher many words. Still, the findings generally supported our expectations and they also revealed surprises. Table 2 gives the Spearman rank-order correlations between the variables measured in this study. Participants' ages and degree of knowledge (belief, alleged experience, and exposure to UFO information) significantly influenced the number of words deciphered, irrespective of the suggestion condition. The suggestion condition also affected the number of words deciphered (F(2, 173) = 63.08, p < .001). A Tukey post-hoc analysis (.05) revealed that subjects in the Pro-Roswell (M = 4.6, SD = .23) and Atomic Bomb Suggestion (M = 4.8, SD = .23) conditions deciphered a similar number of words in the document, and that both of these conditions elicited significantly more words than did the blind control condition (M = 1.6, SD = .23).

Participants in the Pro-Roswell Condition spent an average of 20 minutes trying to decipher the contents of the document. Table 3 shows that participants primed to notice Roswell-related terms indeed tended to interpret some words in accordance with earlier interpretations of the same words in the same positions by ufologists (e.g., "remains," "weather balloons," "land:" see Table 1). Likewise, participants in the Atomic Bomb Condition spent an average of 16 minutes trying to decipher the contents of the document. This change in context was accompanied by new interpretations of certain words. Now, we see that participants perceived content that was congruent with the atomic bomb scenario (e.g., "flash," "glasses," "atomic"). Participants in the Blind Condition spent an average of 14 minutes trying to decipher the con-

^a Men scored as 1, women as 2.

^b Score > 30

c Score < 20

p < .05. *p < .01

TABLE 3
Deciphered Words Exclusive (No Bold Type) and Common (in Bold Type)
to the Three Suggestion Conditions

Pro-UFO condition	Atomic bomb condition	Blind condition
(n = 59)	(n = 58)	(n = 59)
Remains	Fout Wouth TV (n = 17)	Fort Worth TV (n = 11)
Remains	Fort Worth TX $(n = 17)$	Fort Worth TX $(n = 11)$
Fundamental	Glasses	Flew
Fort Worth TX $(n = 24)$	Morning	Story $(n = 7)$
Crash	Flash	Balloons $(n = 2)$
UFO	Atomic	(Various punctuation) $(n = 59)$
Story $(n = 43)$	Laboratory	-
Weather balloons $(n = 20)$	Meaning	
Land $(n = 41)$	Story $(n = 11)$	
(Various punctuation) $(n = 59)$	Weather balloons $(n = 5)$	
	Land $(n = 6)$	
	(Various punctuation) $(n = 58)$)

Note: Even though "Fort Worth" and "weather balloons" naturally coincide, each term counted as two words.

tents of the document. Only a few interpretations were noted, and the content of these efforts did not strongly reflect any particular scenario, such as we found in the previous conditions.

One referee requested that we list how many participants in each condition deciphered each word. We contacted our primary research assistant for these numbers, as we only immediately had the computerized data for analysis. We unfortunately learned that the assistant disposed of the actual score sheets thinking they were useless after he prepared his notes on the words common to the three conditions and compiled the computerized database. As a result, we only have detailed data on the deciphered words common across the three suggestion conditions.

Group Similarities

Even without sophisticated analytic software, the participants across the three conditions found parts of the document legible. Moreover, despite the statistically significant effects of cognitive style and suggestion, participants across the three groups did show consensus on several words in *identical locations* and in the same locations in the document that previous investigators also had agreed upon: "Fort Worth TX" (n = 52), "story" (n = 61), and "weather balloons" (n = 27). Another word of relative agreement, "land" (n = 47), was noticed in identical locations in the document by the two primary suggestion conditions, perhaps because these people were more motivated or discriminating in their interpretations than those in the blind condition. Lastly, all participants across the suggestion conditions perceived various punctuation marks within the document.

Discussion

The surprisingly high agreement between our participants and previous investigators on specific words in identical locations in the Ramey memo suggests that some of the document is indeed legible, even without computer enhancement. However, the meaning or context of those words remains ambiguous because the degree of interpretation of the document is strongly influenced by suggestion effects and the interpreter's cognitive style. We are inclined to believe that such effects have also tainted the previous studies on the memo using sophisticated software because there appears to be weak interrater reliability among these earlier analysts.

In fact, ufologists are probably among the least effective people to be trying to decipher the document. This opinion stems from our observation that one of the main factors arguably influencing the number of words deciphered in this study is the motivation of the participants. Note that those in the Pro-UFO condition spent more time examining the images and subsequently perceived the greatest number of words in the Ramey memo. A UFO story of a crash and cover-up is inherently intriguing to many, and so our participants may have worked harder at deciphering the text than those in the other two conditions. Likewise, since those in the Atomic Bomb Condition deciphered more words than those in the Blind Condition, a similar case effect could hold, as an atomic bomb accident is certainly more interesting than a "photograph of an old document." Accordingly, it seems reasonable to pursue research on the document only if certain methodological criteria are set. We offer some thoughts about such a protocol based on discussions with the Illinois State Archives and David Rudiak (a well-known investigator of the document, personal communication, January 10, 2001).

First, to be methodologically consistent we recommend that standardized computer enhancement be used on the best raw data that we have using comparable software programs. Analysis should be conducted by at least three independent and blind laboratories that specialize in the area of reading and transcribing archival documents. Their only motivation should be payment for providing professional and objective reports. The laboratories could be provided all available scans of the document in order to determine whether the scans from Friedman or the IUFOMRC are the best. With this triangulation approach, we can reasonably estimate the inter-rater reliability (and hence validity) of the resulting interpretations (i.e., do the laboratories show statistically significant agreement on specific words in precise locations in the text). It is possible at this point to calculate an intra-class correlation (Bartko, 1966) on the most current solutions published thus far, but we feel this would be inappropriate since the majority of the previous investigators did not follow a standardized analytic protocol and were not blind to the context and thus the possible content of the document.

Second, we must be cautious in interpreting any statistically significant outcomes of a blind triangulation study. Prior to having independent laboratories

decipher the message, we might also request them to perform preliminary analyses on the structure of the document. This might reveal some insights into what kind of document it is, even if the same laboratories cannot decipher the content of the document. David Rudiak (personal communication, January 10, 2001) proposed some lucid guidelines in this respect:

- A. Determine the letter spacing and position through alignment of columns of clearly visible text and extrapolating to poorly visible letter positions.
- B. Determine length of words, assuming no typographical errors and misspellings, and adhere to those word counts.
- C. Assuming initially that the message is written in proper English instead of some type of cryptic military (or other) shorthand or jargon, the sentences should obey rules of English grammar and obey rules of syntax and semantics. In short, the message should make sense and be consistent in content instead of sounding disjointed. Although, if the memo is, in fact, a military message, then assumptions about the military shorthand and jargon could complicate and possibly invalidate the conclusions being drawn.

We, nonetheless, have some concerns about Rudiak's other suggested guidelines based on his own analyses of the document:

- A. Rudiak stated that he has found jargon words, acronyms and abbreviations, and unexpected punctuation in the document and that these have been stumbling blocks. In short, he claims that the document contains unusual words or word usage. Indeed, our participants also interpreted some marks to be formal punctuation. Thus, it would seem that we are not dealing with a military memo. We suggest, however, that we make no assumptions about the context or content of this document until empirical analyses using the triangulation are performed.
- B. For poorly formed words, Rudiak often selects likely letters and then does a computer search of the English language using search engines for possible fits. Possible fits should again make sense both grammatically and within the historical context in which the message was written. This is a reasonable approach, but it is not clear under what context the document was written. Our analyses showed that when you change the context, letters and words on the document also change. Furthermore, only four words remained in our study after controlling for context and these were ambiguous in terms of what meaning they conveyed. That is, they are consistent with both a Pro and Con view of Roswell, and they in fact could be interpreted as having nothing to do with the case. Working backwards from a context to fill in words as suggested here by Rudiak could lead to the error of finding or interpreting words in the document that are not actually there.
- C. Rudiak believes that background knowledge of the Roswell case is very valuable for making guesses and piecing the message together. For exam-

ple, Rudiak has a large number of 1947 newspaper articles dealing with the military's "post-Roswell debunking campaign" where they held weather balloon demonstrations and claimed that all saucer reports could probably be explained by people seeing weather balloons and radar targets. He suggests that the last line of the Ramey message is about adding these demonstrations to firm up the weather balloon press release they were about to release. Rudiak gives another example: Newspapers mentioned the involvement of General Vandenberg. When Rudiak looked at where the address header should be, he noticed one word that clearly started with "VA." His guess was that this was the beginning of "Vandenberg." When Rudiak enhanced the image, he indeed perceived it to be "Vandenberg." The message, he claimed, was addressed to Vandenberg, not Ramey. This was truly Ramey's message in all senses of the word. It appears in the photograph that the paper is folded over. If true, the header is not readily visible and this is the point in which the RPIT has suggested "a telephone logo" which they have interpreted to mean that this is a typed version of a telephone message handed to Ramey. Likewise, previous studies using computer enhancement have yielded conflicting solutions to the message, and this might be due to the fact that different investigators have differing levels of knowledge about the Roswell case. Indeed, our results revealed that amount of exposure to UFO and Roswell information positively correlated with the number of words "deciphered" from the document. The issue of what words are or are not present is an empirical one that independent and blind laboratories can readily estimate. If certain words, names, abbreviations, acronyms, etc. are present (whatever they are), then independent studies under no priming or context effects should validate their presence.

D. Rudiak assumes some consistency of style and content. For example, the word "disk" apparently in the document appears to be in quotes on the fifth line of the message. It turned out, according to Rudiak, that some other words were also placed in quotes, indicating unusual word usage. Rudiak concluded that this was part of Ramey's style. And as in any well-written message, Rudiak presupposes that succeeding sentences will generally have something to do with what preceded them. This is a reasonable suggestion; however, the meaning of unusual word usage will still remain ambiguous unless the general context of the entire sentence or message is known. Thus, attempting to extract a general context of the document from seemingly, but unverified, unusual word usage can again lead to errors in interpretation.

David Rudiak and other investigators must be commended for their creative and tireless studies of the Ramey document. However, all of the previous approaches seem extremely vulnerable to significant errors in interpretation. Nevertheless, the previous studies of the Ramey memo and the present results suggest that parts of the document might be readable and perhaps even ulti-

mately interpretable. What is needed at this stage is outside corroboration from triangulated, blind analyses conducted by well-qualified laboratories and a set of stringent guidelines (such as proposed by Rudiak) to evaluate the findings. We speculate that any positive findings from a blind, triangulated study will only interest hardened researchers of the case. Many people will likely not regard statistical analysis of a computer-enhanced photograph of the document as hard evidence of a UFO crash and retrieval. In short, there is no substitute for having the original or a good verifiable copy of the document.

In our opinion, the main value in pursuing research on this document is (1) to provide additional data to refine current hypotheses for the Roswell debris and (2) to possibly provide a boost of morale in the field of ufology. Of course, more advanced and systematic triangulated studies of the document could reveal content that bears favorably on a conventional explanation for the crash debris. The field should be prepared for such a verdict as well, and treat the findings with the same respect as they would if the findings were pro-extrater-restrial craft. One referee made an excellent suggestion that relates to our proposed protocol. In particular, obtain an identical camera to that used to photograph the Ramey memo, use several military messages from that era, photograph them from various distances at various angles, and then see whether the text can be deciphered to any extent. The benefit of this experiment using known text is that it could (1) demonstrate that the text could, in principle, be deciphered or not, and (2) be used as a control of the methods used by the independent laboratories to decipher the Ramey memo itself.

A call for funding of a large-scale investigation of the document seems justified. Despite the significant expense involved, the type of study we have outlined would have long-lasting consequence on the Roswell case and it might also have a healing effect for the field. The lead author (Houran, 2001) recently criticized researchers of the Roswell case for ransacking the available data and not working together to bring cohesion and rationality to the case. Yet, working on the problem of the Ramey memo has been a quite different experience. Reliable investigators, while not always in agreement, willingly shared data and research findings, discussed methodologies, and engaged in constructive debates. This was not the state of affairs when the lead author previously commented on the status of the Roswell case (Houran, 2001). Irrespective of the outcome of a large-scale investigation, working collectively and systematically on the Ramey memo may bring the researchers (and organizations) even closer together. It is our feeling that only through a concerted effort among qualified investigators and responsible discussion of the available information in peer-reviewed forums like the JSE can we bring some firm resolution to the mystery of what crashed near Roswell, New Mexico in July of 1947.

Notes

¹ Classified documents will always have markings on the top and bottom, and if they are not present, it is normally a reflection of the photocopying process rather than a hole in the regulations.

² When Friedman's scans were made from the original negative, Friedman complained about dirt and debris that had collected over the years due to the handling of the negatives. It has been claimed that Friedman's scans are not the best available data, but rather scans made last year by the International UFO Museum and Research Center (IUFOMRC) in Roswell, NM. This scan has reportedly been made available to several investigators, such as Burleson and Carey. However, we do not know of any empirical studies that validate the claim that these more recent scans are superior to Friedman's.

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APPENDIX

Age		
Gender		

Questionnaire to Index Knowledge About the Roswell Case

Please put a number next to each item to indicate how much you agree or disagree with that item. Use the numbers as indicated below. There are no right or wrong answers. This is a sample of **your own** beliefs and attitudes.

0 = Strongly Disagree; 1 = Moderately Disagree; 2 = Slightly Disagree; 3 = Uncertain; 4 = Slightly Agree; 5 = Moderately Agree; 6 = Strongly Agree

Ι.	Besides	lite	on	earth,	there	1S	ıntel	ligent	life	elsew	here	ın	the	univ	verse

۷.	believe in UFOs	
3.	I have personally experienced a UFO	

4. I enjoy watching TV documentaries or hearing radio programs about UFOs and the possibility of extraterrestrial life

- 5. I have read books, seen movies, or watched TV programs about the Roswell UFO Incident of 1947_____
- 6. The Roswell UFO Incident of 1947 involved the crash of an extraterrestrial craft_____
- 7. I have heard of the Ramey memo as it pertains to the Roswell UFO Incident of 1947_____
- 8. I have read reports or accounts in popular books about the possible content (or interpretations) of the Ramey memo_____