

Psychophysiological Detection of Deception Accuracy Rates
Obtained Using the Test for Espionage and Sabotage:
A Replication

Acronym: TESRep2

DoDPI97-P-0009

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Protocol only

Date: July 29, 1997

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Acknowledgment

The author would like to express gratitude to the following individuals for their assistance throughout this project.

Gale Ahern
Michael Capps
James (Moe) Morrison
John Schwartz
William Spence
Earl Taylor
Joan Harrison-Woodard
Rose Swinford
Brenda Smith
Frank Ragan
Tommy Pope

Abstract

In August of 1993 all Department of Defense agencies conducting counterintelligence scope psychophysiological detection of deception examinations accepted and endorsed the Test for Espionage and Sabotage (TES) as their primary screening examination format. This action was based on the results of two research studies. Results of the first study using the TES question procedure indicate that the original examiners correctly identified 48 of the 54 (88.9%) programmed nondeceptive and 25 of the 30 (83.3%) programmed deceptive examinees (seven examinees' data were omitted from analysis). Results of a second TES procedure study indicate that the examiners correctly identified 50 of the 51 (98.0%) programmed nondeceptive and 25 of the 30 (83.3%) programmed deceptive examinees (three examinees were omitted). These results were, however, obtained using a relatively small number of observations per cell. It would be prudent to replicate the studies using a larger population to ensure the validity of the conclusions regarding the TES protocol. This study is thus designed to replicate and verify the procedures used during the earlier TES studies with a larger subject population.

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Introduction

The psychophysiological detection of deception (PDD) is a procedure routinely used by United States Department of Defense (DoD), various law enforcement agencies, and officers of the court, to determine an individual's truthfulness concerning topics of interest (Office of Technology Assessment, 1983; Lykken, 1981). In theory, the examinee's physiologic reactivity varies with the personal relevance of presented stimuli and, more so, with attempts to conceal that relevance from the PDD examiner. In the field, the variability of electrodermal activity (GSR-SCR); respiratory rate, volume, or both; and heart rate and blood volume are typically assessed (visually). Increased reactivity, defined as a change in response level to some stimuli but not others, is assumed to reflect the personal relevance of the stimuli presented for the examinee. The typical PDD examination is designed to elicit physiologic responses from the examinee to specific questions regarding topic(s) of interest. Those physiologic responses are subsequently scored by one or more methods and interpreted as indicating the truthfulness of the examinee's verbal responses to the questions of interest.

The counterintelligence scope PDD examination is used to assist in determining the eligibility of DoD civilian, military, and contract personnel for access to specifically designated information protected within special access programs (DoD Directive 5210.48, 1984). Counterintelligence scope PDD examinations are used for both initial and intermittent testing. DoD agencies conducting counterintelligence scope PDD examinations recently accepted and endorsed the Test for Espionage and Sabotage (TES) as their primary examination format (DoD Polygraph Component Meeting, 1993).

The accuracy of PDD examiner decisions obtained using the TES question procedure has been reported in two studies. Original examiners correctly identified 48 of the 54 examinees who were programmed to be nondeceptive and 25 of the 30 examinees who were programmed to be deceptive during the first study (Research Division Staff, 1995). During the second study original examiners correctly identified 50 of the 51 programmed nondeceptive and 25 of the 30 programmed deceptive subjects (Research Division Staff, in press). The data collected from five subjects during the first study and two subjects during the second study were omitted from analysis because examiner notes indicated that the subjects were found to be deceptive for reasons not related to study manipulation. The data collected from one subject during the first study and from two subjects during the second study were omitted from analysis because the examiner decisions were inconclusive.

While there is no reason to question these results, they were obtained using a relatively small number of observations per cell. It would be prudent to replicate the studies using a larger

population to ensure the validity of the conclusions regarding the TES protocol. The current study is therefore proposed to verify the accuracy rates of examiner decisions obtained using the TES procedure in a laboratory situation.

The procedures in this study are designed to replicate those of previous studies (Research Division Staff, 1995, in press) as closely as possible. Changes have, however, been made to: (a) obtain additional data to clarify results of the previous studies; (b) reduce the possibility of errors caused by previous procedural, experimental, and design problems; and (c) verify information in previous reports.

The first deviation is that all examinees will be tested using both subtest A and subtest B. In previous studies, subtest B was not administered to examinees found deceptive during subtest A. This change was made to determine if there is a relationship between responses on the two subtests and to obtain a more complete data set for analyses. The second deviation is that only individuals who have matriculated at a college or university will be tested. The previous studies required examinees to have the equivalent of a High School Diploma. Polygraph program managers have suggested that testing only subjects who have attended college or university classes will provide a more representative sample of the examinee population normally tested.

The third deviation from previous TES studies is that examiners will not confront or interview examinees regarding their veracity. In the previous studies the examinees revealed their veracity if the examiner indicated that the examinee was deceptive. This will be changed to reduce data loss caused by nondeceptive examinees being found deceptive on the first subtest (i.e., the examiner then knows their veracity and further testing is pointless) and to prevent the examiners from knowing subject veracity and estimating subject veracity base rates. A corollary of this change is that original examiners will not know subject veracity. The fourth deviation is that all examinees will be debriefed by examiners who do not know the results of the PDD examination. Examinees in previous TES studies were interviewed extensively by the examiner administering the PDD examination-- only if false positive results (i.e., a deceptive decision was rendered regarding a nondeceptive subject) were obtained during the PDD examination. Extenuating circumstances which could have influenced the results of the examination were, consequently, only identified when the PDD examination results were incorrect. This could have biased the interpreted influence of such extenuating circumstances.

Method

Subjects

Male and female subjects (age 19 to 55) will be tested and the test groups will be balanced as closely as possible for

gender and race. Gender and race will not be considered as independent variables because it is unlikely that a sufficient number of observations of each gender and race will be obtained for a valid statistical analysis to be calculated. Participants will be native English speakers, in good health, and have no prior PDD examination experience. The PDD examiner will make the final determination concerning the subject's suitability for PDD examination using the guidelines specified in DoD Directive 5210.48 (1984) and associated regulations (i.e., Department of the Army Regulation No. 195-6, 1980; United States Army Criminal Investigation Command Regulation No. CIDR 195-28, 1987). These regulations essentially indicate that PDD examinations will not be administered to individuals who cannot respond due to: (a) physical discomfort or disability; (b) mental or physical fatigue; (c) mental disorder; (d) extreme emotional stress, intoxication, narcotic addiction, or excessive use of depressants, stimulants, tranquilizers, or hallucinogens. While not specifically exempted by regulations, pregnant females will not be tested during this study. All subjects will have matriculated at a college or university. The subjects will not have met the project personnel prior to being tested. All subjects will be paid for participation in this investigation.

Subjects will be randomly assigned to groups with the constraint that the groups be as balanced as possible for gender and race, and that an equal number of subjects be assigned to each group. Approximately 240 subjects will be tested. The number of subjects necessary to obtain a statistical power of .80 using a two-tailed single sample proportion test, an effect size of .30 (relative to a chance effect of 0.50), and a significance level of 0.05, was calculated to be 20 (Bavry, 1997). The number of subjects in each group will be increased by 25% to compensate for illness, instrument difficulties, subject attrition, and examinations where no decision can be rendered. Up to 60 additional subjects may be tested for training, counterbalancing, and base-rate padding purposes.

Examiners

Examiners participating in this study will be federally certified graduates of the Department of Defense Polygraph Institute Basic, Test for Espionage and Sabotage, and Axciton or Lafayette courses. Examiners from agencies which routinely use the TES procedures will be selected, by their agency program managers, to participate in the study. Prior to testing, the examiners will participate in a briefing session to familiarize them with the study procedures outlined below. Examiners testing subjects and those acting as quality control personnel will not be told the proportion of deceptive subjects or whether subjects were programmed to be deceptive or nondeceptive until all subjects have been tested.

Apparatus

The physiologic measures (skin conductance, respiration, and cardiovascular activity) routinely evaluated during field PDD

examinations will be recorded. Data will be collected using either a Lafayette (Model #s LX2000 or LX3000, Lafayette Instrument, Lafayette IN) or an Axciton (Interface Box Version S7.1, Axciton Systems Inc., Houston TX) computerized polygraph system to transduce, amplify, record, and display physiologic responses. The GSR-SCR channels on all instruments will be set to automatic. Data will be recorded to computer disk and later copied to other media for archival purposes. The physiological recordings that are edited and printed by the original examiner will be evaluated to determine subject veracity. Subjects will be seated in a Lafayette adjustable-arm subject chair (Model 76871, Lafayette, IN) during testing. The audio portion of the mock spy scenario participation and actual PDD examination will be tape recorded using analog cassette recorders.

Design

THIS SECTION REMOVED TO PRESERVE BASE RATE INFORMATION

Scenarios

Subjects who are programmed to be deceptive will participate in one of four mock spy scenarios. Each scenario will correspond to one of the four relevant questions asked during the TES examination. During the espionage scenario (Appendix A) one subject will steal a classified document from an office and give it to a second subject. The second subject will place the document inside a vehicle located in a nearby parking lot. Subjects participating in the sabotage scenario (Appendix B) will steal either a classified document or a classified computer disk and destroy it using either a document shredder or a pair of scissors, respectively. Subjects enacting the unauthorized contact scenario (Appendix C) will meet with a foreign agent sitting in a car in the parking lot. The agent will request that the subject obtain classified information to be delivered at a later time. During the unauthorized disclosure scenario (Appendix D), the project collaborator will be called out of the office midway through briefing the subject regarding some classified computer information. A third person, who earlier appeared to be fixing a window screen, will enter the office and engage the subject in a conversation regarding the subject's discussion with the project collaborator. All deceptive subjects will receive a \$100 bill (to be returned when the session is finished) as payment for participation in a mock spy scenario. They will also be required to write and sign a statement indicating that "for the purpose of this project" they participated in espionage,

sabotage, unauthorized contact, or unauthorized disclosure, depending on which scenario they participated in.

Procedure

Subjects will initially be escorted or directed to a central waiting area. They will be given information regarding their participation in the research project (Appendix E) and the PDD examination (Appendix F). Those agreeing to participate will be required to sign a research consent form indicating their willingness to participate in the research project (Appendix G). Some subjects will then be taken, in small groups, to another location where they will be programmed deceptive by participating in one of the previously described scenarios (Appendices A through D). The remaining subjects will wait to be taken to the testing site. Deceptive and nondeceptive subjects will be transported to the testing site together to prevent examiners from discerning which subjects participated in a mock spy scenario. Subjects who are to be programmed deceptive will be required to sign a second form, the scenario consent form (Appendix H), indicating their agreement to participate in a mock spy scenario.

The examinations will be conducted according to the TES administration guidelines (Appendix I) provided to the examiners. During the pretest subjects will be required to sign a PDD examination consent form (Appendix J), and the examiner will complete a biographical and medical questionnaire (Appendix K).

Each examiner will complete a TES score sheet (Appendix L) which will include the numeric score (7 point scale) for each subtest and the resulting decision (e.g., significant responding, SR; no significant responding, NSR; or no opinion, NO). Examiners will administer subtest B after reaching a conclusive decision on subtest A--regardless of the decision following subtest A. (Note that this is not in accordance with the TES guidelines or previous studies. This variation is being implemented to obtain data which was not available in previous studies. The variation is an addition, rather than a change in procedures followed during previous studies.) If a NO decision is reached at the end of subtest A or B, the examiner will briefly discuss the questions with the subject to determine if the questions were properly understood and the test will be repeated a second time. If the second test is also scored NO, then the decision for that subtest will be NO.

When the examination is completed the examiner will carry the printed test data and score sheets to a central location for quality control review by another examiner. If the original and quality control examiners concur regarding the examination results, then the subject will be released for debriefing. If the original and quality control examiners disagree, then they will discuss and attempt to resolve the disagreement. If they are unable to resolve the disagreement, then the quality control examiner may direct the original examiner to repeat appropriate

subtests for a maximum of two administrations of each subtest during the study. If the original and quality control examiners still disagree on the results of a subtest, then a second quality control examiner will be asked to review the data and the majority decision will be final.

When testing is completed, subjects will be escorted to a debriefing area. The subjects will be debriefed by a second examiner who will determine if there were extraneous events which could have influenced the results of the examination. The examiner will use a debriefing questionnaire during the interview and record any relevant information on that questionnaire (Appendix M). When the interview is completed, the subject will be asked to read and sign two copies of a debriefing form (Appendix N--one signed copy will be given to the examinee) and will then be released. Examinees who received \$100 for participating in a mock spy scenario will be required to return the money--for which the debriefer will sign a receipt.

Scoring and Decision Criteria

Scoring procedures described in an earlier study (Research Division Staff, 1995) will be used. Original conclusive (e.g., SR or NSR) decisions will be final. If a conclusive decision is not reached, then the responses will be evaluated again by comparing the responses following the first presentation of the first and second relevant questions to the responses elicited by the first presentation of the second control question. If a conclusive decision cannot be made following the second evaluation, then the test will be considered inconclusive and the examiner decision will be NO. The examiner will briefly question the subject regarding possible reasons for the inconclusive test, then repeat that subtest.

A panel of two examiners will review the information obtained during the debriefing interviews. If both panel members indicate that extenuating circumstances, unrelated to the study, could have influenced the decision regarding the subject's veracity, then the data for that subject will be omitted from further analysis. Otherwise the data will be retained for analysis.

Additional Information

An escort will always be present when two or more examinees are together to ensure that the data do not become contaminated by information exchange among examinees. The escort will ensure that examinees do not discuss their participation in mock scenarios or other details of the project. The data of examinees who are uncooperative in this regard will be removed from the analysis.

Individuals who participated in the project as examiners will be asked to complete a debriefing form to obtain their feedback regarding the project (Appendix O). A list of resources needed to complete the project may be found in Appendix P.

Risks to Subjects

Physical and psychological stress during the PDD examination is minimal. Mild discomfort may be caused by the blood pressure cuff used to measure cardiovascular activity. Pressure in the cuff will not exceed 90mm Hg at any time. A slight amount of psychological discomfort may be experienced by some volunteers when lying to the PDD examiner. This is unavoidable and fully explained to volunteers prior to their participation. Volunteers may terminate participation, without censure, at any time.

Data Reduction and Analysis

Dependent variables will include the final decision(s) made regarding subject veracity and, if available, computer algorithm decisions concerning each subjects' veracity. Descriptive statistics will be calculated and reported to include all data collected from subjects in each group and test session. A proportion test will be calculated for each group to determine if examiner (and algorithm) decision accuracy is significantly different from chance accuracy (Bruning & Kintz, 1987). These statistics will be calculated for both interim and final decisions.

Report

A final report including the following major sections will be completed: Abstract, Introduction, Methods, Discussion, and References. This report will be submitted to authorities within the Department of Defense for security classification, however, a determination of 'unclassified' will be requested. If results of this study are unclassified and publication of an article describing the investigation and results would contribute information to the PDD field, every effort will be made to publish a description of the investigation in a professional journal.

Departures from the Protocol

No departures from this protocol are anticipated. If any occur prior to the study's onset, the Human Use Committee (HUC) chair will be informed and a protocol amendment submitted. Unanticipated events during the study will be reported to the HUC chair as soon as possible, but no later than 24 hours after occurrence. The HUC chair will decide whether and when to notify the committee members.

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Appendix A

Espionage Scenario
(DoDPI97-P-0009)

Good morning, my name is Special Agent _____ and I am employed by _____. The project that you will be taking part in today will involve each of you performing specific acts that, without question, would be legally defined as engaging in espionage, insofar as this project is concerned.

In order to successfully complete your mission today and be fully eligible for payment, you must accomplish two things. First, you must work closely with me and precisely do the things that I tell you to do. Second, and of utmost importance, you must avoid being identified, either through talking with anyone other than me (or people whom I designate), or through the PDD examination which will be administered to you, as a person who either participated in or as one who possesses knowledge about the things you will do. These things are absolutely essential to the success of this project.

Your participation today will involve committing, assisting one another, and having specific knowledge of espionage activity during this project. Shortly, I will be telling you what it is I want you to do. As a result of this briefing you will, as far as this project is concerned, have been approached to engage in espionage.

After you perform what it is that I want you to do, I will ask you to sign a statement that will serve as proof that you offered to engage in espionage during this project and you should understand that you have been recruited for the specific purpose of engaging in espionage during this project.

I will tell you exactly what it is I want you to do and how to avoid getting caught (because that is the last thing you want to do). The discussions I have with you will entail your receiving training for espionage activity during this project. I and those who I specifically designate, will be the only persons who will know exactly what you are to do. You know my name (repeat here) and where you can locate me, therefore, I am your contact for espionage purposes.

If you understand everything that I have told you so far, we can continue. Do you have any questions? Do you agree to participate and follow my instructions carefully? If not, please advise me now so that a suitable replacement can be obtained.

PROJECT BRIEFING

This entire project is concerned with methods which are employed to identify people who might be involved in espionage activities. Because it deals with sensitive matters, it was

necessary to classify all materials concerned with the project. Espionage involves obtaining that classified material. That is why I need you. I am too well known and my feelings about the project are common knowledge. If I were seen in the area, the people I am going to send you to see would likely suspect something and make the job of retrieving the material that much more difficult. The plan I will outline for you involves both of you and you both will know what it is the other is to do. This is what I want you to do:

Subject B will remain here with me until I direct otherwise. Subject A will go to room _____, enter and locate the office of Assistant (Note: substitute real name). You may have to look around, or ask someone in order to accomplish this task, but try to appear natural. If you do this, no one will suspect you are up to anything. It will be natural to "feel" as though everyone knows what you are up to, but unless you say something, they actually have no idea. This is the project assistant's office. I want you to engage Assistant, in a brief conversation, asking help in locating Target (Note: substitute real name), another person located within that building, well away from the assistant's office. Because the assistant generally does this, you will be offered a seat while Target is located. Target's office is located near the back of the building, so the assistant will be gone about 3-4 minutes. As soon as the assistant is out of sight, you are to open the top right hand desk drawer and you will see a folder clearly marked PROJECT OSAFMI - TOP SECRET. I know this because, over a period of time, I have observed the assistant's activities regarding this material. Inside the folder, you will find a computer disk marked OSAFMI PROJECT. Contained on this computer disk is classified and highly sensitive information pertaining to this project. The disk also is marked TOP SECRET. You are to remove this disk from the folder and hide it somewhere on your person, or in a magazine you are carrying, so that it cannot be seen. Put this computer disk into the folder in its place (Give examinee a duplicate disk), leave the folder inside the desk drawer, giving the appearance that nothing has been disturbed, just switch the disks. As quickly as possible, (BUT DO NOT RUN) exit the office and depart the building. DO NOT WAIT FOR THE ASSISTANT TO RETURN.

After you leave the building, DO NOT DO ANYTHING TO DRAW ATTENTION TO YOURSELF. It is important that you do not get caught with the disk on your person. Therefore, I want you to go immediately to the trash bin in the parking lot next to the building _____. Once there, walk over to the _____ car and get in on the passenger side. On the floor, you will see a (bag or other suitable container). Place the disk into the container. Place the container back on the floor of the car. Remain in the car for a few more minutes. You may then leave the car and return to this building. On your return to the building, stay on the hard surface road. Do not cut through any grassy areas or between buildings. To do so would attract attention to yourself. On your return to this building, you will see Subject B standing near

Building _____. You are to signal Subject B (Note: Substitute name) that you have made the drop of the classified material by crossing to the other side of the street and bending over as if picking up a piece of litter. Once you have given this signal, you may return to this building where I will be waiting for you. I then will give you further instructions.

SUBJECT B's BRIEFING

Subject B, you must position yourself so that (a) you do not draw unwarranted attention to yourself and (b) that you can carefully watch for Subject A's signal. Remember he/she will walk across the street and bend down as if picking up a piece of litter. This will be your signal that the "drop" has been made, that the area appears to be safe, and that you may proceed to make the required pickup. You are to proceed to the ____ car near the trash bin. Use care to ensure that you are not being followed. Use a nondirect route, if necessary, but it is essential that the pickup be made within a few minutes of receiving the signal. Stay on the hard surface road and do not cut between buildings. Carefully ensure that when you approach the car you have not attracted attention to yourself. If all appears to you to be secure, take a seat on the passenger side. You should see the container we spoke of earlier. Pick it up and remove the disk from it. Place the disk in the pre-addressed addressed disk mailer that you have been provided and hide it on your body or in a magazine so it is not visible. After a few minutes, you may leave the car, and return to this building, taking the same route that you took when approaching the car. In this way, should anyone be observing you, it will appear as if you were simply taking a walk. You will return to this building, where you will surrender the disk to me and I will give you further instructions. Insofar as espionage during this project is concerned, you then will have done the same things that I outlined for Subject A (Repeat if deemed necessary).

PRE-EXAMINATION BRIEFING

You both have performed the tasks that I outlined. Now I want to be sure you are clear regarding your activity here today. You have been contacted, recruited and tasked to commit espionage during this project. Furthermore, you have engaged in espionage and have been paid for this activity (give each examinee \$100 and have them put it in a pocket). I would like you to acknowledge, on this card, that you have done these things. Please write "I (examinee's name) understand that for the purposes of this project, I have been contacted, recruited and tasked to engage in espionage. In addition, I have engaged in espionage and have received \$100 for my activity." Examinee should sign the card and put it in a pocket along with the money.

Next you will be asked to submit to a PDD examination. The purpose of this examination is to see if the examiner can successfully identify you as a person who either performed or has

knowledge of the espionage which was committed during this project. At some point during the examination, you may be asked questions about the following: (a) whether you have been approached to engage in espionage against this project; (b) whether you have offered to engage in espionage against this project; (c) whether you have been contacted by anyone for espionage activity against this project; (d) whether you have received any training for espionage activity against this project; (e) whether you have received any specific tasking for espionage activity against this project; (f) whether you have any specific contacts for espionage purposes against this project; (g) whether you have performed any specific activity for espionage against this project; and (h) whether you have received any compensation for espionage activity against this project. I do not know the specific questions that you will be asked, but these are the general areas that the questions will cover. You are to deny completely participating in any of these acts, but do so in a convincing manner. It is essential that you understand that you have, in fact, done all the things I just outlined. But it is equally important that you avoid being identified by the polygraph examiner as being deceptive. Each of you will have the statement that you signed acknowledging your involvement in espionage and the \$100 on your person when you go to take this examination.

Examinees will be instructed not to reveal whether they were being deceptive to the PDD examiner. They will be further instructed to openly discuss their veracity and any other relevant information with the debriefer who interviews them following the examination. Examinees will be instructed to remain in the waiting room until they are escorted to the examination room.

Appendix B

Sabotage Scenario
(DoDPI97-P-0009)

Today I would like you to commit sabotage. You are going to destroy some very critical information regarding this project. Destruction of material or information is considered sabotage. For the purposes of this project, you have been contacted for sabotage purposes. I have approached you to engage in sabotage during this project, I am recruiting you to engage in sabotage and I am going to task you to perform an act of sabotage. In addition, I am going to pay you \$100 to perform this act of sabotage.

I want you to go to room _____. The project director's assistant will be seated at a desk. Tell the assistant that you need to see the director. The assistant will ask you to have a seat while the director is located. As soon as the assistant leaves the room, open the assistant's top right hand desk drawer. Computer disks are kept in that drawer. Find the one labeled "TOP SECRET - OSAFMI Project." Take the disk and hide it on you, or in a magazine you are carrying. Close the drawer and leave the office (don't wait for the assistant to come back). Don't let anyone see the disk. Bring the disk back to me.

When the examinee returns with the disk:

This disk contains the classified/sensitive operational information for this project such as who is scheduled when and where, etc. Of course we can reconstruct the information, but it will take a little time. I want you to destroy this disk. (Give the examinee scissors and have them cut the disk into pieces.) Convince the examinee to conceal a piece of the disk on their person--and to dispose of it when they finish the project. This should be done so the disk cannot be reconstructed.

Now you have actually committed an act of sabotage during this project. You have destroyed a computer disk with project information on it. Here is \$100. Put the money in a pocket (preferably not a purse). I would like you to acknowledge, on this card, that you have done these things. Please write "I (examinee's name) understand that for the purposes of this project, I have been contacted, recruited and tasked to engage in sabotage. In addition, I have engaged in sabotage and have received \$100 for my activity." Examinee should sign the card and put it in a pocket along with the money.

Among other things, the examiner is going to ask you if you have engaged in any act of sabotage during this project. This would include being approached to engage in sabotage, offering to engage in sabotage, being contacted to engage in sabotage, being recruited to engage in sabotage, being tasked to engage in sabotage, or receiving any money for engaging in sabotage. Have

you done any of these things? (examinee should answer yes - if not, then reinforce). Your job, of course, is to lie to the examiner - do not let the examiner know that you have engaged in any of these activities. We need to see if the PDD format can identify you as being deceptive.

A variation of this scenario will be used, in which the examinees will steal a document from the desk drawer. When the examinees return, the project collaborator will have them run the document through a paper shredder. (This is done to accurately replicate the earlier study (Research Division Staff, in press))

Examinees will be instructed not to reveal whether they were being deceptive to the PDD examiner. They will be further instructed to openly discuss their veracity and any other relevant information with the debriefer who interviews them following the examination. Examinees will be instructed to remain in the waiting room until they are escorted to the examination room.

Appendix C

Unauthorized Contact Scenario
(DoDPI97-P-0009)

Today we would like you to be a spy. Since this project involves national security, enemies of the U.S. would like to get information regarding the project and they undoubtedly would pay for it. In fact, I have arranged a secret contact with a foreign national today. However, since I must take care of other matters, I want you to go to the secret meeting. This is a foreign national, who works for a foreign group and who is interested in obtaining information regarding our entire detection of deception program, but specifically information regarding this new project. I need to know for what information this person is looking. You need to find out what he wants so that I can get it for him. While you're with him, get him to give you payment up front. This is too dangerous to not get something right away. I think \$200 would be a good place to start. Now, you need to go out into the parking lot and look for a (describe car) car. It should be over in the back corner of the lot (describe lot location). Don't let anyone see you get in the car. His code words will be "Are you looking for the employment list?" You must answer "No, I'm looking for a book." After you've made contact, find out what he wants, when and where I am to meet him next, and get some money. Any questions?

When the examinee gets in the car, the foreign national will be speaking on a car phone in a foreign language. He will end the phone conversation, still in the foreign language, with "we'll talk about this later." In case, examinee speaks the language, the foreigner will be talking about getting information about the project. After he ends the phone conversation, he will speak to the examinee in the foreign language, saying "Are you looking for the employment list?" When the examinee looks puzzled or doesn't respond, he apologizes in English and repeats the question. Examinee will respond "No, I'm looking for a book." Foreigner will then introduce himself as Mr. Smith and state "I was expecting Mr. NAME1. Did NAME1 send you?" Foreign national should steer the conversation to the topic. He wants NAME1 to get information regarding the accuracy of the new format for guilty individuals, the specific relevant questions being used, the type of format being used, where the new format will first be used in the field and when it will first be used. Examinee should request \$200 which the foreigner will provide. Foreigner also will give the examinee the information about when and where he will meet NAME1 next and what the new identification codes will be. Foreigner tells examinee not to be seen going back to the room.

NAME1 gets the information and the money from the examinee. Then tells the examinee "For the purposes of this project, you have had unauthorized contact with a foreign national. You have just come from a secret meeting with the foreigner, during which

time he requested highly classified information. This individual is a foreign national working for a foreign government in an attempt to destroy our strongest security system, the PDD program. Among other things, your examiner will be asking you whether or not you have had any secret or clandestine meetings with a foreign national that you don't want him to know about. Have you?

The examinee should say "Yes." If he doesn't, then NAME1 must reinforce the above. Then NAME1 asks what the examinee will tell the examiner, they should say that they are going to lie. Then NAME1 will repeat the procedure with the issue of anyone having requested sensitive or classified information. It should be reinforced continually, that the purpose of this project is to beat this examiner. It's the examinee's job to not let the examiner discover that he has engaged in these particular behaviors. Finally, NAME1 will give the examinee \$100 and instruct him to put it in a pocket (on the person--not in a purse). Then NAME1 will say "I would like you to acknowledge, on this card, that you have done these things. Please write 'I (examinee's name) understand that for the purposes of this project, I have had a secret clandestine meeting with a foreign national, who, in fact, is requesting information regarding this project. In addition, I have had unauthorized contact with a foreign national and have received \$100 for my activity.'" Examinee should sign the card and put it in a pocket along with the money.

Examinees will be instructed not to reveal whether they were being deceptive to the PDD examiner. They will be further instructed to openly discuss their veracity and any other relevant information with the debriefer who interviews them following the examination. Examinees will be instructed to remain in the waiting room until they are escorted to the examination room.

Appendix D

Unauthorized Disclosure Scenario
(DoDPI97-P-0009)

Good morning, my name is Special Agent NAME1 and I am employed by the United States Secret Service. I will be giving you the instructions for this project. Since this project involves national security, everything we do here today is highly sensitive information and should not be discussed with anyone. Enemies of the U.S. would like to get information regarding this project and would probably pay for it. For simplicity, this project is referred to as TES, and if this study is successful the format will be employed by the government within the next three months. Most DoD agencies will use the format and we expect it to be considerably more accurate than the present formats. At this point someone interrupts NAME1 to tell him he has a phone call down the hall. NAME1 excuses himself, telling the examinee to wait there for him. One minute later a second individual enters the room and engages the examinee in a conversation. Some tactics might include - I'm looking for Mr. Mispronounced NAME1. Is this the TAS project? Well, what project is this? Maybe I had the wrong name. What are you going to be doing? - The idea is to engage the examinee in a conversation during which the examinee divulges as much information as possible. After a few minutes, the second individual indicates that this is not the project he is interested in and leaves.

A few minutes later NAME1 returns. NAME1 apologizes for the interruption and then, as if it were a given, reminds the examinee that he should not discuss anything they have said, with anyone. At this point the examinee should mention the other person he was talking to. If not, then NAME1 should ask the examinee directly - Did you talk with anyone while I was on the phone? NAME1 then gets the examinee to explain what information he divulged. NAME1 explains to the examinee that, for the purposes of this project, the examinee he has provided classified information to an unauthorized person. It is important that the PDD examiner does not find out that this disclosure has occurred. Offer \$100 for examinee not to tell the examiner and instruct him to put it in a pocket (on the person - not in a purse). Among other things, your examiner will be asking you whether during this project you have provided classified material to an unauthorized person. Have you? The examinee should say yes. If the examinee says no, then NAME1 must reiterate the above.

NAME1 should then ask what the examinee will tell the examiner - hopefully the examinees will say that they are going to lie and say no. It should be reinforced continually, that the purpose of this project is to beat the examiner. It's the examinee's job to not let the examiner discover that these particular behaviors were engaged in. NAME1 will then tell the examinee "I would like for you to acknowledge, on this card, that

you have done these things. Please write 'I, (examinee's name), understand that for the purposes of this project, I have provided sensitive classified information regarding the project to an unauthorized person. In addition, I have \$100 for participating in their unauthorized disclosure activity.'" Examinee should sign the card and put it in a pocket along with the money.

Examinees will be instructed not to reveal whether they were being deceptive to the PDD examiner. They will be further instructed to openly discuss their veracity and any other relevant information with the debriefer who interviews them following the examination. Examinees will be instructed to remain in the waiting room until they are escorted to the examination room.

Appendix E

Research Description
(DoDPI97-P-0009)

1. **PROJECT TITLE:** OSAF/MI SCREENING STUDY. To be conducted by the Department of Defense Polygraph Institute. Fort McClellan, Alabama.

2. **PRINCIPLE INVESTIGATOR:** Andrew B. Dollins, Ph.D.

3. **DISCUSSION:** Congress has directed the Department of Defense to investigate the use of psychophysiological detection of deception (PDD) formats for national security purposes. This project is involved with developing and validating a new PDD format to be used to deter espionage and sabotage against the United States and to catch those individuals who have engaged in espionage or sabotage against the United States. Since there are very few actual spies, most of the people who undergo this examination will be innocent of any wrong doing. Therefore, we want to make sure that this test correctly identifies innocent individuals as innocent. Since it is highly unlikely that you have engaged in espionage or sabotage against the United States, we would like to give you the PDD examination. We are confident that true spies will respond physiologically when they lie on a PDD examination. We need to be sure that innocent individuals, such as yourselves, do not exhibit excessive amounts of nervous responding when they are given the examination. All we will be asking you to do is to undergo a PDD examination in which the examiner will ask you questions regarding your involvement in espionage and sabotage activities. All you need to do is be honest. Occasionally an innocent individual may be distracted during an examination and therefore show physiological responses during the examination. If this occurs, the examiner will discuss with you what you were thinking about during the test, in order to determine why you responded. The entire procedure will take between 2 and 2 1/2 hours.

YOU SHOULD NOT PARTICIPATE IN THIS STUDY IF YOU:

1. Previously participated in a PDD examination.
2. Are pregnant.
3. Have blood pressure or heart problems.
4. Currently suffer from an acute health problem (such as a cold or active allergy problem) which would make it difficult for you to sit quietly, without movement, for five consecutive minutes.

4. **YOUR RIGHTS:** You have the right to ask any questions about any aspect of your participation in the study. If any problems arise at any time in conjunction with your involvement in the study, or if you have been injured in any way as a result of the study, you should contact the Principal Investigator, Andrew Dollins, or the Director of the Department of Defense Polygraph Institute, Michael Capps. In the event that you do

have questions or any of the above has occurred please contact either Mr. Capps or Dr. Dollins at telephone number (205) 848-3803.

5. **DISCOMFORTS:** Some people find it difficult to sit still for several minutes at a time during the PDD examination, while psychophysiological measurements are being made from the body. A blood pressure cuff on your arm will be inflated periodically. Some people find the inflated cardiovascular cuff moderately uncomfortable. However, the cuff is usually inflated for less than 5 minutes at a time. In addition, your respiration and sweat gland activity (measured from the fingers) also will be recorded.

6. **RISKS:** There are no known risks involved in this project.

7. **TAPE RECORDING:** Audio and/or video recordings may be made of examinations conducted during this project. The tapes collected will be maintained until the operational and data analysis portions of the project are completed. The recording media may then be erased and made available for re-use.

8. **CONFIDENTIALITY OF RECORDS:** During the PDD examination you will be asked a series of questions. All the information you tell the examiner is privileged information which will not be revealed to anyone not directly involved in the research. All the polygraph charts, score sheets, interview forms, examiner work sheets, and related documents associated with your examination will be used for research purposes only. Your name and your participation in the project will not be revealed to anyone not directly involved in the research. This includes any admissions of a criminal nature. No information that you provide to the examiner will leave the examination room.

9. **VOLUNTARY PARTICIPATION:** Your participation in this project is completely voluntary. If you decide not to participate in this project, you may discontinue at any time. Should you decide not to participate, please inform Dr. Dollins, or if you decide to stop during the PDD examination itself, inform the examiner with you and you will be released. According to the agreement with the employment agency, you will be paid only for the portion of the study you complete. All payments to you will be made by the employment agency.

10. **BENEFITS:** In addition to the payment you receive, the main benefit is the satisfaction of knowing you contributed to a scientific study that is important to national security. We need your cooperation in order to determine the accuracy of this new format. An additional benefit is learning what a PDD examination is like. If you ever have to take a PDD examination, having had prior experience will be a benefit as you will know what to expect.

11. ADDITIONAL COMMENTS: It is very important that you convince the PDD examiner that you are being completely truthful, even if you are not being truthful. Examiners should not ask if you are being truthful. If a PDD examiner does ask if you are being truthful, please tell another staff member immediately. It is also VERY IMPORTANT that you do not discuss your experiences during the PDD examination with your fellow research participants. If either of the above occurs, you will be withdrawn from the study without further benefit.

Appendix F

Explanation of Examination
(DoDPI97-P-0009)

The purpose of the examination is to determine if you have engaged in any spy activities during this project. Since you have not engaged in any such activities, all you need to do is to answer the examiner's questions truthfully. The examiner will ask you a little background information (you may refuse to answer questions regarding your personal background) and some medical questions to make sure you are fit for a PDD examination. The examiner will explain to you the instrument and all of the procedures. The examiner will be asking you a number of questions, which he will review with you. Just be honest. The examiner then will attach the various sensors and conduct the PDD examination. All you need to do is to pay attention, listen to and follow the examiner's instructions, and answer all the questions truthfully. Are there any questions?

Appendix G

Research Consent Form
(DoDPI97-P-0009)

Current Date (M/D/Y): ___/___/___ Subject #: _____

Name: _____ SSN: _____

Date of Birth (M/D/Y): ___/___/___ Place of Birth: _____

Permanent Home Address: _____

Permanent and Temporary Home Phone Number(s): _____

This form is affected by the Privacy Act of 1974.

AUTHORITY: 10 USC 3013, 44 USE 3101 and 10 USC 1071-1087, and E.O. 9397.

PRINCIPLE PURPOSE: To document voluntary participation in a DoD Polygraph Institute Research Program.

ROUTINE USES: The SSN and home address will be used for identification and locating purposes. Information derived from the study will be used to document the study, decisions regarding claims, and for mandatory record keeping associated with human use in government research. Information may be furnished to federal agencies.

VOLUNTARY DISCLOSURE: Failure to furnish requested information will prevent your voluntary participation in this investigational study.

PERSONAL STATEMENT

I, _____, being at least 19 years old, do hereby volunteer to participate in a research study entitled "OSAF/MI Screening Study", being conducted by the Department of Defense Polygraph Institute (DoDPI) at Fort McClellan, under the direction of Dr. Andrew Dollins.

1. _____ I understand that I am participating in a research project which will utilize psychophysiological detection of deception (PDD) formats.

2. _____ I understand that as a part of this study, I will be taking a PDD examination, during which I will be asked to sit still for several minutes at a time, while psychophysiological measurements are being recorded from my body. I am not pregnant

and do not suffer blood pressure, cardiovascular, or other problems which would prevent me from sitting still comfortably for up to 5 minutes at a time.

3. _____ I understand that there are no known dangers or risks arising as the result of my participation in this study.

4. _____ The nature of my participation, the purpose of the investigation, and the methods by which it is to be conducted, have been explained to me. I have been given the opportunity to ask questions concerning this study, and all questions have been answered to my satisfaction.

5. _____ I understand that I may terminate my involvement in this project at any time and for any reason. However, I will not be paid unless I complete the project.

6. _____ I understand that the PDD examination will be video or audio recorded. The recordings will be used for research purposes only and will be erased within seven years after the end of the study.

7. _____ I understand that if I have any complaints I may contact the Principal Investigator, Andrew Dollins, Ph.D., or the Director of the DoDPI, Michael Capps, at (205) 848-3803.

Participant Signature & Date

Witness Signature & Date

Printed Name

Printed Name

Appendix H

Scenario Consent Form
(DoDPI97-P-0009)

Current Date (M/D/Y): ___/___/___ Subject #: _____

Name: _____ SSN: _____

This form is affected by the Privacy Act of 1974.

AUTHORITY: 10 USC 3013, 44 USE 3101 and 10 USC 1071-1087, and E.O. 9397.

PRINCIPLE PURPOSE: To document voluntary participation in a DoD Polygraph Institute Research Program.

ROUTINE USES: The SSN and home address will be used for identification and locating purposes. Information derived from the study will be used to document the study, decisions regarding claims, and for mandatory record keeping associated with human use in government research. Information may be furnished to federal agencies.

VOLUNTARY DISCLOSURE: Failure to furnish requested information will prevent your voluntary participation in this investigational study.

1. Although it is true that we need to test this PDD format on individuals whom we know are being honest, we also need to test this format on individuals we know are being deceptive. Just as it is critical to clear an innocent individual it is equally important to identify someone who is being deceptive. Therefore, we would like you to participate in a mock spy situation, and then lie to your PDD examiner regarding your involvement. We need to determine whether or not this new format can identify you as being deceptive regarding your activities here today. Your job will be to convince the PDD examiner that you have not been involved in any spy activities during this project.

2. I understand that I am being asked to participate in a mock spy situation and in the interest of national security, I am being asked to lie regarding my participation. I understand that it is in the best interest of this project for me to lie convincingly. To intentionally not lie convincingly would sabotage the outcome of this mission. I voluntarily agree to participate in this aspect of this project.

Participant Signature & Date

Witness Signature & Date

Printed Name

Printed Name

Appendix I

TES Administration Guidelines
(DoDPI97-P-0009)

The following information is from the DoDPI TES Administration Manual and earlier TES studies (Research Division Staff, 1995; in press). Some terms have been changed to more accurately describe the procedures or to reflect policy changes. While we are attempting to replicate the TES format as it was originally tested, some changes have been made to adapt the procedure for this specific study.

DEFINITIONS AND ABBREVIATIONS:

- Examination - the entire procedure, to include all phases of a PDD examination for both subtests.
- Examination Decision - the decision (i.e., SR, NSR, NO) for the entire examination.
- No Decision - Any examination that is not NSR or SR after INITIAL SCORING of subtests "A" or "B" is NO DECISION, until the subtest is scored again without utilizing the first comparison question.
- No Opinion (NO) - There were insufficient evaluation criteria to render a decision of SR or NSR (after the rescore).
- No Significant Response (NSR) - There were no significant physiological responses to the relevant questions.
- Question Score - the numerical evaluation of the physiological activity in response to a specific relevant question.
- Question Spot Score - the numerical sum of the three question scores associated with the presentation of the same question on a subtest.
- Significant Response (SR) - Physiological responses to the relevant questions indicate that something about the questions is significant to the examinee.
- Subtest - TES consists of two subtests. Subtest A utilizes relevant questions related to sabotage and espionage, while subtest B utilizes relevant questions related to unauthorized disclosure and unauthorized contact.
- Subtest Decision - the decision (i.e., SR, NSR, NO) for a subtest.
- Subtest Score - the sum of the six relevant question scores on a subtest.

OVERVIEW OF EVENT SEQUENCE:

1. TURN ON TAPE RECORDER and give a general overview of the procedures.
2. Read the consent form (Appendix J) to the examinee and witness the examinee's signing of the consent form.
3. Complete the Biographical and Medical Questionnaire (Appendix K) and determine examinee's suitability for testing. [NOTE that the final decision regarding subject suitability rests with the examiner. IF THE SUBJECT IS UNSUITABLE, DON'T RUN THE TEST.]
4. Explain how the polygraph instrument works and the F³ theory of deception detection--this should be very brief.

5. Attach components.
6. Administer a standard known solution numbers test--using the rationale described in section 6. below. DO NOT show the test to the examinee, but convince the examinee that deception was indicated.
7. Explain and review the sabotage and espionage relevant questions.
8. Explain and review the sacrifice relevant questions.
9. Explain and review the directed lie comparison questions.
10. Explain and review the irrelevant questions.
11. Administer subtest A.
12. Print and evaluate subtest A.
13. If the subtest A result is No Opinion, explain that the subject failed to produce sufficient responses, review the relevant and directed lie comparison questions and administer subtest A again.
14. Explain and review the unauthorized contact and unauthorized disclosure relevant questions.
15. Use the same comparison questions or explain and review new directed lie comparison questions.
16. Administer subtest B.
17. Print and evaluate subtest B.
18. If the subtest B result is No Opinion, explain that the subject failed to produce sufficient responses, review the relevant and directed lie comparison questions and administer subtest B again.
19. Ask subject to wait while examination results are reviewed by Quality Control officer.
20. Resolve any conflicts with Quality Control officer -- administer subtests again if necessary.
21. Thank examinee for help and escort to departure area.
22. Provide Quality Control officer with collected data.

NOTE: At no time will the examiner question the subject's veracity.

ENVIRONMENT:

All PDD examinations should occur in a suitable examination room. There should be chairs for the examiner and examinee and a table for the polygraph instrument. The examination room should not contain any other distracting equipment, or decorations. The room may or may not have an observation window, or video equipment.

NO ONE other than the examinee and the single examiner is authorized to be present in the examination room during the first three phases of the PDD examination.

INTERVIEWS:

Interviews will be conducted in a manner which conveys respect for the examinee and is in no way degrading to the examinee. During this study, the examiner will talk with the examinee only during pretest interviews, the question review procedures, and brief question reviews following an NO decision

on a subtest. The basic philosophy following an NO decision will be to determine why the relevant questions were significant for the examinee and to assist the examinee in resolving any problems with the relevant issues.

Interviews of examinees during any phase of a PDD examination will not probe any of the following areas.

- a. Religious beliefs or affiliations;
- b. Beliefs and opinions regarding racial matters;
- c. Political beliefs and affiliations;
- d. Opinions regarding the constitutionality of legislative policy;
- e. Use of drugs or alcohol (except for the purposes of assessing suitability);
- f. Affiliations with labor unions;
- g. Sexual matters; and
- h. Finances

INTERVIEW TERMINATIONS:

Whenever an interview is terminated before the examination has been completed, the examiner will immediately advise the appropriate supervisory examiner of the situation, and then in the PDD report fully describe the circumstances of the termination. The report must include the reason for discontinuance, how much of the examination remained, whether or not adequate tests had been conducted from which a conclusion may be rendered, the attitude of the examinee, and what was said or what behavior caused the termination. If any arrangements were made to reschedule the examination for another day, they should be noted. IT IS THE RESPONSIBILITY OF THE EXAMINER TO DETERMINE IF THE EXAMINEE IS SUITABLE FOR TESTING.

EXAMINER TERMINATED INTERVIEWS:

An examiner may terminate an examination for several reasons. The examiner may assess the examinee to be unsuitable for the examination, either mentally, physically or behaviorally. The examiner may be ill or the examiner may feel unable to establish adequate rapport to conduct a valid examination. Medical problems and psychological problems involving examinees must be discussed with the supervisory examiner, but the final decision to test an examinee rests with the examiner.

EXAMINEE TERMINATED INTERVIEWS:

An examinee may terminate an examination for several reasons. The reasons for examinee termination may be less clear than the reasons for examiner termination. In some cases it may be desirable to have a transcript typed regarding the discussion which led to the termination of the interview. If the examinee has stated that (s)he does not wish to continue the interview or resume it at a later date, the supervisory examiner should be advised that the person has discontinued processing. If the examinee makes any allegations or threats, these must be noted and contained in the PDD report.

THE TEST:

1. TURN ON TAPE RECORDER and give a general overview of the procedures. Explain that you will:
 - (a) ask the subject to sign a consent form,
 - (b) briefly review some biographical and medical questions,
 - (c) explain how and why a PDD examination is completed,
 - (d) conduct a known solution examination to demonstrate the PDD examination process,
 - (e) review the questions to be asked during subtest A,
 - (f) repeat subtest, A if necessary,
 - (g) review the questions to be asked during subtest B,
 - (h) repeat subtest B, if necessary,
 - (i) end the examination.
2. Read the PDD Examination Consent Form to the examinee, answer any questions the examinee has, ask the examinee to sign the form, and sign the form yourself as a witness.
3. Review the Biographical and Medical Questionnaire with the subject. REMEMBER THAT THE EXAMINER DETERMINES IF EXAMINEE IS PHYSICALLY AND MENTALLY SUITABLE FOR TESTING.
4. Explain how the polygraph instrument works and the F³ theory of deception detection--be very brief. Use the following example as a guideline.

You may be a little nervous, especially if you have not had a PDD examination before. This is expected and is quite normal. To help put you at ease, I will explain what the instrument is and how it works. The polygraph is a diagnostic tool that is used to determine if a person is telling the truth. It simply records physiological changes that take place in your body when you are asked questions. Today, changes in your respiration, sweat gland activity, and blood pressure will be recorded. Please notice the two rubber tubes on the desk. One will be placed across your chest and the other will be placed around your abdominal area. They will be used to record your breathing. There are two metal finger plates next to the rubber tubes. These plates will be attached to two of your fingers and will record your sweat gland activity. Finally, there is a blood pressure cuff on the desk. It is the same type of cuff a doctor uses to measure blood pressure. It will be placed on your arm and will monitor changes in your cardiovascular activity.

These physiological changes are a result of an automatic response system in your body. It is a response system over which you have no control. For example, visualize yourself walking down a dark

alley late at night. Suddenly you hear a loud noise. You will instantaneously decide either to remain where you are and investigate the source of the noise, or to flee the area, sensing danger to your well being. Regardless of the choice you make, your body automatically adjusts itself to meet the needs of the situation; your heart may beat faster, your breathing may change and you may break out in a cold sweat.

When you were growing up, if you are like most people, you were raised to know the difference between right and wrong. Quite probably, all of the adults you came in contact with--your parents, grandparents, relatives, teachers, church officials --taught you that lying, cheating, and stealing were wrong. Ever since you were a young child, you have been programmed to know that lying is wrong. Think about the first time you lied and you got caught. Remember how your body felt during that confrontation. Your heart may have been racing or you may have been sweating. However, the responses were automatic; your body adjusted to the stress of the situation.

People are not always 100% honest. Sometimes it is kinder and more socially acceptable to lie than to be honest - such as telling someone you like their clothes when you really think the clothes are awful. It is important for you to understand that even though a lie might be socially acceptable or only a small lie, or a lie by omission, your body still responds. The recording on the polygraph will show only the physiological responses. It cannot know what kind of lie you are telling. Therefore, it is extremely important that you be totally honest to those questions concerning this project.

5. Attach components including the pneumograph tubes, the GSR finger plates, and the cardiovascular auscultatory cuff. BE SURE THE GSR CHANNEL IS SET TO AUTOMATIC MODE.
6. Administer a standard known solution numbers test--using the rationale below. DO NOT show the test to the examinee, but convince the examinee that deception was indicated. NOTE: be sure to use the word acquaintance or demonstration test when discussing this with the examinee.

I'm now going to demonstrate the physiological responses we have been discussing. This test is intended to give you the opportunity to become accustomed to the recording components and to give me the opportunity to adjust the instrument to you

before proceeding to the actual test. In addition, this test will demonstrate to me that you are capable of responding and that your body reacts when you knowingly and willfully lie.

The standard four components (two pneumograph tubes, electrodermal plates, and cardiovascular cuff) are attached at this time, followed by the acquaintance test. The acquaintance test should be conducted in the manner taught at DoDPI and during TES training. The results will be discussed with the examinee as follows:

That was excellent. It is obvious that you know lying is wrong. You're not capable of lying without your body reacting. You reacted strongly when you lied about that number. Even though I asked you to lie and it was an insignificant lie, you still responded. That will make this examination very easy to complete as long as you follow my directions.

7. Explain and review the sabotage and espionage relevant questions. It is suggested that the preferred questions be used, but the alternate questions may be used at the examiner's discretion. THE QUESTION LIST SHOULD BE INCLUDED WITH THE DATA FILE. Begin with a brief explanation of the types of questions to be used such as the following:

I am going to review the questions which I will be asking you on the examination. There are two types of questions; security questions pertaining to your activities during this project and diagnostic questions. I will explain each type of question and I will review each question in detail. The first questions will be the security questions pertaining to your activities during this project.

Preferred Espionage Questions:

Have you committed an act of espionage during this project?

Alternate Espionage Questions:

Have you spied during this project?

Have you committed espionage during this project?

This question refers to the intentional, unauthorized release of classified information or material to a foreign government or power, with the intent to or reason to believe that the information or material would injure the government or give an advantage to the foreign power. For purposes of this project, espionage would be the improper copying, removal, transportation or release of project information or materials. Engaging in espionage would include being contacted by someone or contacting someone for the purposes of

providing information about the project. If you have personal involvement, assisted someone, or know of an unreported act of espionage, you have committed espionage during this project. Espionage during this project would include acts that were of your own initiative or at the request of someone else (a superior or employer). If you have been approached, if you were recruited, if you were trained or were involved in the planning of, or if you were tasked to engage in an act of espionage during this project, you have engaged in espionage during this project. Your motivations might have been money or ideology or loyalty (following directions) and you may or may not have received any compensation, monetary or otherwise. If you have been involved in any of these activities, you have engaged in espionage during this project.

Preferred Sabotage Question:

Have you committed an act of sabotage during this project?

Alternate Sabotage Question:

Have you deliberately damaged (destroyed) material associated with this project?

This question refers to a deliberate act of destroying, damaging, contaminating or altering anything used in the nation's defense with the intent of impeding the nation's defense capabilities. For the purposes of this project, sabotage would be any intentional act of slowing down, damaging, or destruction of property, operations or personnel related to this project. This could be accomplished by the actual destruction or damaging of equipment or information or through the interference with information systems such as faulty computer programming or introducing a computer virus. Engaging in sabotage would include being contacted by someone or contacting someone for the purposes of sabotage during this project. If you have personal involvement, assisted someone, or know of an unreported act of sabotage, you have committed sabotage during this project. Sabotage during this project would include acts that were of your own initiative or at the request of someone else (a superior or employer). If you have been approached, if you were recruited, if you were trained or were involved in the planning of, or if you were tasked to engage in an act of sabotage during this project, you have engaged in sabotage during this project. Your motivations might have been money or ideology or loyalty (following directions) and you may or may not have received any compensation, monetary or otherwise. If you have been involved in any of these activities, you have engaged in sabotage during this project.

8. Explain and review the sacrifice relevant question. The sacrifice relevant may be reviewed as the first relevant question or as the last (third) relevant question. Provide a rationale for the sacrifice relevant question (e.g. "I need to ensure that you intend to be truthful to the security questions, so I am going to ask you..."). The rationale may depend on whether the sacrifice relevant is reviewed as the first or third relevant question.

Use one of the following sacrifice relevant questions (the first is preferred).

Do you intend to answer the security questions truthfully?

Regarding the security questions, do you intend to answer truthfully?

9. Explain and review the directed lie comparison questions. Use the following explanation example as a guideline.

I am now going to discuss the second type of question, the diagnostic questions. As I explained earlier, when you lie your body responds and I will be able to see the response, just as I did during the demonstration. If, however, you were given a test and I saw no responses to any of the questions, it would look like your were telling the truth. For various reasons (sick, tired, using some medication) some people lose their capability to respond. Consequently, I must ask some questions that demonstrate you continue to have the capability to respond when you are lying and that you do not respond when you are telling the truth.

First I will review those questions used to determine if you are capable of responding when you lie. I already know the answer to these questions because we all have done these things at one time or another. When I ask the question I want you to think of an occasion when you did this--don't tell me about it, just think of a specific time. Then lie to me and say no.

Before each question preface it with--we have all (e.g. violated traffic laws)--you have haven't you (they should answer yes)--of course. Now think of a specific incident (don't tell me). When I ask you 'Did you ever violate a traffic law' I want you to lie to me and say "NO." When I ask you this question on the test--I want you to think of that incident when you lie to me.

The examiner may select from among the following directed lie questions. These are the only acceptable directed lie comparison questions. Review two from the following list.

Did you ever take any government (company) supplies for your personal use?
 Did you ever violate a traffic (fishing, hunting, boating) law?
 Did you ever say something derogatory about another person behind their back?
 Did you ever say something that you later regretted?
 Did you ever lie to a previous supervisor about anything?
 Did you ever borrow anything and forget to return it?
 Did you ever lie to a co-worker about anything at all?
 Did you ever say anything in anger that you later regretted?
 Did you ever brag about yourself to impress others?

NOTE: "Did you ever" may be substituted with "Have you ever"

10. Explain and review the irrelevant questions. Use the following explanation example as a guideline.

The final diagnostic questions you may hear are ones you will answer truthfully so that I can see how you are responding when you tell the truth. It will be obvious that you are telling the truth. The questions are....

The following are the only acceptable irrelevant questions. Review two from the list.

Are you now in Alabama?
 Is today _____?
 Do you sometimes drink water?
 Are you now on (or at location)?
 Are you sometimes called _____?
 Are the lights on?
 Are you sitting down?
 Is this the month of _____?
 Is the door closed?

11. Administer subtest A. Prepare the examinee for the test.

Review all questions again and have the examinee answer as they should during the examination. Questions should be reviewed in the following sequence: SR, R1, R2, C1, C2, I1, I2. If the examinee answers a DLC incorrectly, remind the examinee to think of the specific incident and to answer as you instructed. Repeat the review until the examinee does it correctly.

Tell examinees they will be hearing some or all of the questions, that the questions will occur in no specific order, that some of the questions will be repeated, and that they should sit still and follow directions. Remind them that they should think about the questions to which they are going to lie.

[PAGE 39 WITHHELD: As of 16 July 2000, the Defense Security Service is withholding page 39 of this report, invoking the (b)(2) exemption of the Freedom of Information Act on the ground that release of this page would allow circumvention of an agency rule.]

[PAGE 40 WITHHELD: As of 16 July 2000, the Defense Security Service is withholding page 40 of this report, invoking the (b)(2) exemption of the Freedom of Information Act on the ground that release of this page would allow circumvention of an agency rule.]

The three numerical scores for each of the two relevant questions will be summed to yield two question spot scores.

The R1 and R2 question spot scores will be totaled to yield a preliminary subtest score. In addition, the responses to 1R1 and 1R2 will be compared to the response to 1C2 only to yield rescore totals.

If the question spot scores for R1 or R2 is -3 or less, or the subtest score is -4 or less, then the decision will be SR.

If the subtest score is +4 or greater and the R1 AND R2 question spot scores are greater than 0 (i.e., positive with no zeros), then the decision will be NSR.

If these conditions are not met, then the original scores for the 2nd and 3rd presentations of R1 and R2 will be added to the rescore totals to yield a final decision--using the decision criteria specified above.

If no decision can be made at this point the examinee will be retested.

13. If the subtest A decision is No Opinion, explain that the examinee failed to produce sufficient responses, review the relevant and directed lie comparison questions and administer subtest A again.

NOTE: When substantive admissions have been made to a relevant question, preface that relevant question with one of the following caveats when retesting.

Other than what you told me...
Other than what we discussed...

NOTE: Subtest B will be conducted regardless of the decision on subtest A. Examiners should not interrogate or question subjects' veracity. Any objective problems (excessive sleepiness, admissions, perceived countermeasures) should, however, be noted on the score sheets.

14. Explain and review the unauthorized contact and unauthorized disclosure relevant questions as follows.

Preferred Unauthorized Contact Question:
During this project, have you had unauthorized contact with a foreign national?

Alternate Unauthorized Contact Questions:
During this project, have you spoken with a foreigner?
During this project, have you had unauthorized contact with a foreigner?

Normally refers to secret or clandestine contact with a non - U.S. citizen or someone who represents a foreign government, power, group or organization. For the purposes of this study, I want to know if you have had any secretive meetings with a foreign individual that you don't want me to know about, that you are trying to hide from me.

A foreign national is someone who is self-identified as a non-U.S. citizen or as representing a foreign government or group.

Have you had contact with anyone who has requested sensitive or classified information about this project? Contact includes all means of communication - personal, phone, computer link-up, radio or written communication. This contact would be considered unauthorized if you are intentionally trying to keep me from knowing about it.

Any unreported visits, a close or continuing contact with a foreigner, contact that might result in an adverse impact on the project, any type of clandestine, secret or hidden meetings with a foreigner would be considered unauthorized contact.

Preferred unauthorized disclosure question:
During this project, have you provided classified material to an unauthorized person?

Alternate unauthorized disclosure question:
During this project, have you given (released) classified material to anyone?

This question normally refers to the disclosure, by any means, of any sensitive or classified material to any unauthorized person. For the purposes of this project, any attempt on your part to provide or to sell any information or material relevant to this project to anyone would be considered providing sensitive or classified material to an unauthorized person. The disclosure could have been an intentional, deliberate disclosure done with forethought and the intent to get personal or monetary gain, or to try to hinder the project, or it could have been accidental and unintentional. An unauthorized person is anyone who was not a part of this project.

15. Use the same comparison questions or explain and review new directed lie comparison questions (see sections 9 & 10 above).
16. Administer subtest B (see section 11 above).
17. Print and evaluate subtest B (see section 12 above).

18. If the subtest B result is No Opinion, explain that the subject failed to produce sufficient responses, review the relevant and directed lie comparison questions and administer subtest B again (see section 13 above).
19. Ask subject to wait while examination results are reviewed by Quality Control officer. Take printed data, score sheets, and a computer disk containing the raw data to the quality control area and ask a Quality Control officer to evaluate the information.
20. Resolve any conflicts with Quality Control officer-- administer subtests again (up to a total of two A subtests and two B subtests for each examinee) if necessary. At this point, the decision to administer the subtests again belongs to the Quality Control officer. If the Quality Control officer and original examiner cannot agree on a decision, and the maximum number of subtests has been administered, then a second Quality Control officer will be asked to render an opinion. The final decision for the examination will be the majority agreement among the original examiner and the two Quality Control officers. ALL CONFLICTS AND RESCORING SHOULD BE DOCUMENTED ON THE SCORE SHEETS OR ADDITIONAL PAPER AND INCLUDED IN THE SUBJECT'S FILE.
21. Thank examinee for help and escort to departure area.
22. When the examination is completed the examiner should provide the quality control officer with the following:
 - (a) the completed Biographical and Medical Questionnaire;
 - (b) the completed PDD Examination Consent Form;
 - (c) a copy of all data collected on a 3.5 inch floppy disk labeled with the project number, current date, examiner name, examinee name, and subject number;
 - (d) the cassette tape used to record the session--labeled with the date and subject number;
 - (e) the completed score sheets including all examiner and QC comments;
 - (f) the original printed paper charts.

Appendix J

PDD Examination Consent Form
(DoDPI97-P-0009)

CONSENT TO INTERVIEW WITH POLYGRAPH

PLACE: _____ TIME: _____

Before we begin the PDD examination you must understand your rights.

YOUR RIGHTS

YOU HAVE THE RIGHT TO REFUSE TO TAKE THE EXAMINATION.

IF YOU AGREE TO TAKE THE EXAMINATION, YOU HAVE THE RIGHT TO STOP THE EXAMINATION AT ANY TIME.

IF YOU AGREE TO TAKE THE EXAMINATION, YOU HAVE THE RIGHT TO REFUSE TO ANSWER ANY INDIVIDUAL QUESTIONS.

WAIVER AND CONSENT

I HAVE READ THIS STATEMENT OF MY RIGHTS AND I UNDERSTAND WHAT MY RIGHTS ARE. I VOLUNTARILY AGREE TO BE EXAMINED BY MEANS OF THE POLYGRAPH DURING THIS INTERVIEW. I UNDERSTAND AND KNOW WHAT I AM DOING. NO THREATS OR PROMISES HAVE BEEN USED AGAINST ME TO OBTAIN MY CONSENT TO ADMINISTER THIS EXAMINATION.

I CERTIFY THAT I AM PRESENTLY IN GOOD HEALTH AND THAT I AM NOT BEING TREATED BY A PHYSICIAN, PSYCHIATRIST, OR PSYCHOLOGIST FOR ANY PHYSICAL OR MENTAL DISORDER (EXCEPT AS LISTED BELOW). I FURTHER DECLARE THAT I AM NOT NOW BEING, NOR HAVE EVER BEEN, TREATED FOR SERIOUS DISEASES OF THE HEART, LUNGS, OR CENTRAL NERVOUS SYSTEM (EXCEPT AS LISTED BELOW).

I CERTIFY THAT I HAVE PROVIDED THE EXAMINER WITH THE FOLLOWING EXCEPTIONS:

I KNOW OF NO MEDICAL REASON WHY I SHOULD NOT UNDERGO A PSYCHOPHYSIOLOGICAL DETECTION OF DECEPTION EXAMINATION AT THIS TIME.

_____	_____	_____
EXAMINEE	DATE (M/D/Y)	WITNESS
_____	_____	_____
PRINTED NAME	PARTICIPANT NUMBER	PRINTED NAME

Appendix K

Biographical and Medical Questionnaire
(DoDPI97-P-0009)

Participant number: _____ Completion Date (M/D/Y) ___/___/___

This form is affected by the Privacy Act of 1974.

AUTHORITY: 10 USC 3013, 44 USE 3101 and 10 USC 1071-1087, and E.O. 9397.

PRINCIPLE PURPOSE: To document health status during voluntary participation in a DoD Polygraph Institute Research Program.

ROUTINE USES: The SSN and home address will be used for identification and locating purposes. Information derived from the study will be used to document the study, decisions regarding claims, and for mandatory record keeping associated with human use in government research. Information may be furnished to federal agencies.

VOLUNTARY DISCLOSURE: Failure to furnish requested information will prevent your voluntary participation in this investigational study.

Please carefully complete all of the blanks below:

Name (Please Print): _____ Gender: ()M ()F

Occupation: _____ Age: _____

Hours of sleep last night: _____

Have you taken a previous PDD Examination: ()Yes ()No

Have you ingested alcohol, nicotine, or caffeine (including coffee, tea, soft-drinks, and chocolate) within the last 24 hours? ()Yes ()No

If so, what and when? _____

How would you describe your present health and physical well being?
()Excellent ()Good ()Fair ()Poor

Are you presently under a physician's care and are you taking any medication? ()Yes ()No

If so, for what condition(s)? _____

Please give the type, dosage, and last time you took medication:

Are you experiencing any pain or discomfort today?

None Mild Moderate Severe

Reason for any pain or discomfort today: _____

Please note reason(s), if examinee is unsuitable for testing.
Include additional comments here as well.

Appendix L

TES Score Sheet
(DoDPI97-P-0009)

Completed by Examiner (name) _____ Subtest _____

NOTE: Please clearly indicate a numerical score in each blank.

First Presentation R _____ R _____ Examinee _____
 Pneumograph _____ Examinee # _____
 Electrodermal _____ Date & Time _____
 Cardiovascular _____ Comments: _____

1st Presentation Totals _____

Second Presentation R _____ R _____
 Pneumograph _____
 Electrodermal _____
 Cardiovascular _____

2nd Presentation Totals _____

Third Presentation R _____ R _____
 Pneumograph _____
 Electrodermal _____
 Cardiovascular _____

3rd Presentation Totals _____ R _____ R _____ TOTAL

(1+2+3) = Preliminary Totals =====> _____

Presentation 1 w/o 1C1 R _____ R _____
 Pneumograph _____
 Electrodermal _____
 Cardiovascular _____

1st w/o 1C1 Totals _____ R _____ R _____ TOTAL

(1+2+3) = Preliminary Totals =====> _____

DECISION NSR NO SR

TES Score Sheet
(DoDPI97-P-0009)

Completed by QC (name) _____ Subtest _____

NOTE: Please clearly indicate a numerical score in each blank.

First Presentation R _____ R _____ Examinee _____

Pneumograph _____ Examinee # _____

Electrodermal _____ Date & Time _____

Cardiovascular _____ Comments: _____

1st Presentation Totals _____

Second Presentation R _____ R _____

Pneumograph _____

Electrodermal _____

Cardiovascular _____

2nd Presentation Totals _____

Third Presentation R _____ R _____

Pneumograph _____

Electrodermal _____

Cardiovascular _____

3rd Presentation Totals _____ R _____ R _____ TOTAL

(1+2+3) = Preliminary Totals =====> _____

Presentation 1 w/o 1C1 R _____ R _____

Pneumograph _____

Electrodermal _____

Cardiovascular _____

1st w/o 1C1 Totals _____ R _____ R _____ TOTAL

(1+2+3) = Preliminary Totals =====> _____

DECISION NSR NO SR | Concur / NonConcur

Appendix M

Debriefing Questionnaire
(DoDPI97-P-0009)

Participant number: _____ Completion Date (M/D/Y) ___/___/___

Participant Name (please print): _____

Debriefing Name (please print): _____

DEBRIEFER: The primary purpose of this debriefing is to determine if the examinee could have been found deceptive or nondeceptive for reasons not associated with the project. That is, if extenuating circumstances, unrelated to the study, could have influenced the decision regarding the subject's veracity,

TO EXAMINEE: We have a few questions we would like for you to answer to help us better understand your responses during the project. We need for you to be completely truthful and honest in your answers. I'm now going to fill out a form as I ask you questions.

1. Do you believe the polygraph indicated you were lying during the PDD examination?

___ (a) No ___ (b) Yes ___ (c) Not sure

2. Can you think of anything that has occurred in your life that would make you appear to be guilty of espionage, sabotage, or revealing secrets?

___ (a) Yes ___ (b) No

If Yes, what (be specific)? _____

3. Were you worried that the examiner would ask questions that were not reviewed?

___ (a) Yes ___ (b) No

Why (be specific)? _____

4. How exciting was the part you played in this study?

(a) Not at all (b) Somewhat

(c) Moderately (d) Very

5. Did you try to beat the polygraph examination?

(a) No (b) Yes

Why or why not (be specific) _____

6. Do you think you could defeat the polygraph examination if you wanted to?

(a) No (b) Yes

Why or why not (be specific) _____

7. What were you thinking about during the test (be specific)?

8. Did you make any kind of hidden movements during the examination?

(a) No (b) Yes

If Yes, what type (be specific) _____

9. Did you try to create any reactions on the polygraph?

(a) No (b) Yes

Why or why not (be specific) _____

10. Have you taken any medication today that you have not previously reported?

(a) No (b) Yes

If Yes, what type? _____

Appendix N

Debriefing Form
(DoDPI97-P-0009)

Participant number: _____ Completion Date (M/D/Y) ___/___/___

On behalf of the entire project staff, I would like to thank you for participating in this project. Your participation here today was more important than you may realize. Depending on the results of this study, we may be able to provide the Department of Defense with a new PDD examination which will significantly change current procedures and make security examinations simpler and hopefully more accurate.

If you participated in a simulated spy scenario, we assure you that did not violate any rules or laws. The activities were strictly for the purpose of deceiving the examiner. Please return the \$100 to the person presenting you with this form and you will both sign below to indicate that the money was received. You should keep a copy of this form for a few days, in case there are any questions. If you did not participate in our simulated spy scenario, your role was equally important. No detection of deception procedure is useful if it doesn't correctly identify truthful people.

We hope you enjoyed your participation and were not made uncomfortable in any way. If you have any questions or concerns, please feel free to bring them to the attention of the employment agency; Dr. Andrew Dollins, the Principal Investigator; or Mr. Michael Capps, Director of the Institute at Fort McClellan, Alabama (205-848-3803).

We ask that you please do not discuss what you did here today, with anyone for at least six months. Many people from the community will be participating in this project, perhaps relatives or friends of yours. It is very important that they do not have any prior information regarding the project. Knowledge of the study might seriously damage the results of this project. Thank you for your understanding and cooperation.

Please sign this form below to indicate that you understand and agree to follow these instructions.

Participant Name: _____
Print Signature

I (circle one) DID / DID NOT receive \$100 from the examinee:

Debriefee Name: _____
Print Signature

Would you be interested in participating in another research project? _____ (a) No _____ (b) Yes

Appendix O

Examiner Debriefing Form
(DoDPI97-P-0009)

Though a great deal of time and effort went into the design and implementation of this project, no scientific study is ever without room for improvement. In order to properly assess the data, and prepare for future studies, we'd like to get your observations regarding how this study went. Please be thorough in your answers, as they are important.

1. Was the purpose of this study adequately explained to you?

___ (a) No ___ (b) Yes

2. Did you have adequate time to perform your examinations?

___ (a) Yes ___ (b) No

If No, why not? _____

3. Were the facilities adequate for testing?

___ (a) Yes ___ (b) No

If No, why not? _____

4. Did the equipment function properly?

___ (a) No ___ (b) Yes

If No, why not? _____

5. How often do you think you were able to determine which subjects were deceptive without the polygraph test?

___ (a) Never ___ (b) Rarely
___ (c) Often ___ (d) Always

6. If you figured out the subject's programming before the testing, what tipped you off?

Appendix P

Estimated Resources
(DoDPI97-P-0009)

Two separate locations will be required. This is necessary to ensure that the examiners cannot obtain information concerning which subjects participated in a spy scenario. Location 1 will be used for subject orientation, programming, and debriefing. Location 2 will be used for examination administration. Only the Principal Investigator and those transporting subjects will be allowed to travel between locations during testing. It would be preferable if individuals working at Location 1 were also lodged separately from individuals working at Location 2.

Both locations will be needed for 14 consecutive testing days, excluding Sundays. It is anticipated that the facilities will not be used on Sundays, but the rooms should be retained continuously to preclude the necessity of moving equipment.

NOTE: Current plans are to begin the project the evening of Thursday, August 14, 1997 (staff briefing) and end it on the evening of Thursday, August 28, 1997.

Physical Requirements

Location 1 (minimal requirements):

- 1 Parking lot for at least 25 cars. Study participants will need to park cars and some scenario enacting will occur in the parking lot. A location with some nearby small buildings, an exercise track, or other landmark would be optimal.
- 2 Waiting rooms. Subject will wait in these rooms before and after going to the test site. These rooms should be large enough to serve as waiting rooms and be capable of seating up to 10 people. Two rooms are needed because the programmed deceptive and nondeceptive subjects must be kept separate. Optimally, these rooms would be located somewhat away from each other as well as the other rooms at this location.
- 1 Office with telephone, desk or table, 2 chairs. This space will be used as the command center.
- 2 Debriefing rooms. These rooms will be used for interviewing individual subjects after the examinations have been run.
- 4 Scenario rooms. These rooms will be used for meetings between study collaborators and subjects during spy scenario enactment. Each of these rooms should contain a table or desk and two to three chairs. At least one of these rooms should have a window, preferably one that opens, for the Unauthorized Disclosure Scenario.

- 2 Assistant's offices. These offices will be used during the Espionage and Sabotage scenarios. Should contain desk, telephone, and computer.
- 2 Toilets (i.e., men and women). These will be used as toilets by study collaborators and subjects.

Location 2 (minimal requirements):

- 10 Examination rooms. These rooms will be used to administer PDD examinations. Each room should contain one table or desk, 1 examiner chair, and 1 examinee chair. The rooms should have a closing door, at least one available wall outlet, and good lighting. The rooms should be quiet, free of distracting objects (i.e., pictures, additional furniture--at least on one wall), and climate controlled. Optimal size would be around 10' by 10'.
- 2 Quality Control rooms. These rooms will be used as offices by the Quality Control Officers. Each should contain one table or desk and 1 to 3 chairs of any type. The rooms should be quiet and located centrally to the examination rooms. One large room with two desks and several chairs could be substituted.
- 2 Holding rooms. Subjects will wait in these rooms before and after testing. These rooms should be large enough to serve as waiting rooms and be capable of seating up to 10 people. Optimally, these rooms would be located away from each other as well as the examination rooms to reduce traffic and potential noise near the examination rooms.
- 2 Optional rooms. One of these rooms should be securable and would be used to store equipment and documents (computers, printers, audio tape recorders, audio cassette tapes, forms used during testing). The second room should contain a desk, at least two chairs, a telephone/FAX machine, and spare computer for the PDD examiner supervisor.
- 2 Toilets (i.e., men and women). These will be used as toilets by study collaborators and subjects.

Personnel

All non-subject personnel should plan to arrive at the test site in time to meet at 1900 h for at least two hours on the evening before testing begins. They should plan to leave Birmingham after participating in 14 days of testing (excluding Sundays). Personnel should plan on working daily with only Sundays off. Location 1 personnel who wish to travel on Saturday evening and should plan on returning to the test area by 0730 on the following Monday. Location 2 personnel who wish to travel on Saturday evening and should plan on returning to the test area by 0930 on the following Monday.

Location 1 (minimal requirements)*:

- 1 - Principal Investigator
- 6 - Scenario Setters (preferably PDD examiners, but not necessarily TES trained--should be at least interrogation specialists, will also assist in scenario setting--one must speak foreign language).
- 4 - Research Assistants to escort subjects, pose as assistants, and provide general support.

Location 2 (minimal requirements)*:

- 10 - Examiners (TES trained & certified).
- 2 - Quality Control Personnel (TES trained & certified).
- 1 - Examiner Supervisor (Monitors testing & resolves on-site problems) -- must have authority to supervise examiners.
- 2 - Research Assistants to escort subjects and provide general support.

* Would like to have at least one easily accessible telephone at each location.

Subjects

Will require a total of 240 contract subjects scheduled to arrive as follows.

Day	Date		TIME	
			0800-1200	1300-1700
01	14 Aug 1997	Thu		
02	15 Aug 1997	Fri	10 subjects	10 subjects
03	16 Aug 1997	Sat	10 subjects	10 subjects
04	17 Aug 1997	Sun		
05	18 Aug 1997	Mon	10 subjects	10 subjects
06	19 Aug 1997	Tue	10 subjects	10 subjects
07	20 Aug 1997	Wed	10 subjects	10 subjects
08	21 Aug 1997	Thu	10 subjects	10 subjects
09	22 Aug 1997	Fri	10 subjects	10 subjects
10	23 Aug 1997	Sat	10 subjects	10 subjects
11	24 Aug 1997	Sun		
12	25 Aug 1997	Mon	10 subjects	10 subjects
13	26 Aug 1997	Tue	10 subjects	10 subjects
14	27 Aug 1997	Wed	10 subjects	10 subjects
15	28 Aug 1997	Thu	10 subjects	10 subjects
16	29 Aug 1997	Fri	** FINISHED **	

Subject screening criteria:

- Male and female, between 19 and 55 years old.
- Native English speaker
- No prior PDD examination
- Must have proof that are attending or have attended college

- (i.e., college ID, diploma, transcript, course receipt)
 Self reported to be in good health
 Subjects SHOULD NOT participate if
- 1) Previously participated in a PDD examination.
 - 2) Are pregnant.
 - 3) Have blood pressure or heart problems.
 - 4) Currently suffer from an acute health problem (such as a cold or active allergy problem) which would make it difficult to sit quietly, without movement, for five consecutive minutes.

Equipment/Resources

- 1 or 2 transport vehicles - will need to transport up to 10 people at a time. Scenario setters will drive vehicles.
- 1 Vehicle which can be used as meeting place for unauthorized contact scenario
- 1 Vehicle which can be used as a document deposit place for espionage scenario
- 10 \$100 bills (for subject scenario enactment)
- 10 PDD examination chairs
- 13 Computerized Polygraphs with appropriate printers and software
 - 10 for testing
 - 2 for Quality Control
 - 1 Spare in the event of problems
- 10 Spare ribbons/cartridges for examiner's printers
- 10 Boxes of tractor feed 9.5 x 11 computer paper
- 260 3.5 inch high density (1.44 MB capacity) floppy diskettes
- 14 Audio cassette tape recorders (for recording examinations)
- 520 90-minute cassette tapes
 - 1 Portable video camera with monitor and cables (for archival purposes)
 - 5 Desktop/portable computers (2 for secretary offices & 1 for Examiner Supervisor (with MO drive), 2 for administrative purposes (1 with MO drive).
 - 2 Generic printers
 - 1 Laser printer (for printing forms, schedules, etc. on site)
 - 1 Copying machine for duplicating forms (or access to one)
- 30 Clip boards
- 2000 Pages of white copy paper (notes / numbers tests)
 - 40 8.5 x 11 inch pads for notes
 - 100 Ink pens
 - 500 Manila file folders
 - 8000 Copies of various forms (Approximate)
 - 1000 Blank 3x5 cards
 - 12 Each - miscellaneous office supplies
 - staple guns
 - 8.5 x 11" paper writing pads
 - tape dispensers with tape
 - scissors
 - boxes of paper clips
 - 30 5.25" diskettes labeled TOP SECRET (Espionage & Sabotage Scenarios)
 - 10 Manila envelopes (Espionage & Sabotage Scenarios)

10 Mailing packages for floppy diskettes

IF POSSIBLE

- 1 FAX machine for communication with DoDPI
- 4 2-way radios or cell-phones for communication between sites and drivers

- 2 Coffee machines for examiners & staff
- Miscellaneous magazines
- Coffee
- Cream
- Sugar
- Cups