

New York City College of Technology

City University of New York

Institutional Review Board (IRB)

Application for Approval to Use Human Subjects in Research

John Huntington, Professor, Entertainment Technology

Toija Riggins, Ph.D., student, Entertainment Technology

Question #1: *State the purpose of the research. Include major hypotheses and research design. If the study is part of a larger study, briefly describe that larger study and indicate whether it has received IRB approval from another institution. Please keep in mind that the IRB is composed of individuals from many disciplines and thus the description of your research should be written in terms readily comprehensible by non-experts.*

Despite the fact that there are several thousand years of live entertainment tradition, there has been very little systematic research investigating the ways that audiences react to various forms of entertainment. Audience members are bombarded with sensory input during a show, and we are interested in learning more about that sense perception.

The purpose of our proposed research is to examine the role of infrasound (sound waves below 20 cycles per second) on emotional states in audience members in our existing *Gravesend Inn* "Haunted Hotel" attraction. Infrasound is already present in the designed soundscape of the *Gravesend Inn*; we are attempting to quantify the potential effect of infrasound as a possible arousal agent in this study. The results of the study can be used in the short range to improve our haunted house, and may have broader applications in the field of live performance.

Researchers in the United Kingdom have suggested that infrasound (very low frequency sound waves below about 20Hz) might be present in certain allegedly "haunted" locations and may be responsible for reported feelings of "uneasiness." Vic Tandy and Tony Lawrence of Coventry University, UK (1998) found that a "19hz standing air wave created sensory phenomena suggestive of a ghost" in a presumably haunted situation. Tandy and Lawrence (2000) demonstrated a repeated effect in which "infrasound was found to be present at the point at which individuals had reported apparitional experiences at exactly the same frequency predicted in the original paper."

In 2002, our colleague Richard Wiseman, Ph.D., Professor in the Public Understanding of Psychology at the University of Hertfordshire, UK, partnered with acoustician/engineer and performer Sarah Angliss to test similar notions in a non-laboratory, public participation experiment. This study, called *Infrasonic*, was a carefully controlled psychological experiment in the form of two back-to-back live concerts. Infrasound was present in one music selection in

one concert, and absent in that same piece in the other concert. The double-blind investigation involved a sample of over 750 subjects who were given a questionnaire to log their emotional states and to report any strange sensations. The results revealed participant reports of “strange feelings,” including “a sense of presence, shivers down the spine, feelings of pressure and other strange accounts.”

The investigation proposed by student, Toija Riggins, Ph.D. and Professor John Huntington in the Entertainment Technology Department, would consist of a greatly simplified, in-laboratory extension of the Tandy & Lawrence and Angliss & Wiseman research. During the department’s annual *Gravesend Inn* theme park-style haunted hotel attraction in Voorhees Theater in October 2010, participants will be recruited to join the research study that will be held in a separate department classroom--the department’s scenic construction shop. Once in this environment, participants will hear the pre-recorded description of an unusual event that allegedly took place in that location--the supposed murder of a college professor. We will expose one-half of participants to infrasound during this presentation, while the other half will not be exposed. Promptly after the pre-recorded voiceover ends, the lights will be turned off. The playback of the background story, execution of the eerie event, the infused infrasound, the length of the experiment, and the random assignment of participants to groups will all be strictly controlled by “show control” technology, of which department professor, John Huntington, is the industry expert. The proposed design is completely double-blind; neither the researcher nor the participants will know during which sessions infrasound is being generated. After the presentation has concluded, participants will be asked to complete a brief questionnaire, the same questionnaire used in the *Infrasonic* research. The questionnaire asks respondents to rate their emotions on Happy-Sad, Aroused-Sleepy, Exited-Bored, Angry-Calm, and Confident-Fearful, five-point Likert scales. (The “Confident-Fearful” scale was added specifically for this study because of its subject matter and was not included in the *Infrasonic* research.)

Because information about this experiment that is passed on to other potential subjects would damage the validity of their responses, participants will be only partially debriefed during the experimental sessions. They will be provided a full debriefing statement via email once all study activity has completely concluded. Statistical analyses will include a multivariate analysis of variance to evaluate differences among means of the treatment group (infrasound present) versus control group (infrasound absent) on the set of questionnaire scales (dependent variables). If earlier findings are supported, we would expect these analyses to reveal that those exposed to infrasound should report greater feelings of emotional discomfort than those not exposed to it. That is, we should expect higher scale scores in the treatment group than in the control group.

Report of *Infrasonic* research study: <http://www.spacedog.biz/extras/Infrasonic/infrasonicResults.htm>

Tandy V. & Lawrence, T. (1998). The ghost in the machine. *Journal of the Society for Psychical Research*, 62, 851, 360-364.

Tandy, V. (2000). "Something in the Cellar." *Journal of the Society for Psychical Research*, 64, 129-140.

Wiseman, R., Watt, C., Greening, E., Stevens, P. & O'Keeffe, C. (2002). An investigation into the alleged haunting of Hampton Court Palace: Psychological variables and magnetic fields. *Journal of Parapsychology*, 66(4), 387-408.

Wiseman, R., Watt, C., Stevens, P., Greening, E. & O'Keeffe, C. (2003). An investigation into alleged 'hauntings.' *The British Journal of Psychology*, 94, 195-211.

Question #2: *Describe the source(s) and the selection criteria. Selection of subjects must be equitable and, in the case of protected populations such as children, prisoners, pregnant women, the mentally disabled, etc. should address their special needs. Include the number of subjects. The text of any advertisement, letter, flier, oral script, or brochure used to solicit potential subjects must be attached.*

Subjects will be recruited and self-selected from the paying attendees of the NYCCT Entertainment Technology Department's fall 2010 *Gravesend Inn* theme park-style "haunted hotel" attraction in Voorhees Theater, 186 Jay St. The attraction is open to the public and traditionally runs before and during the week of Halloween. We will attempt to recruit two hundred (200) subjects. Children will not be recruited. Recruitment will take place after participants have completed their time inside the attraction, the last phase of which involves participants being seated in the house and watching two large video projection screens. At this time, they are normally given programs and allowed to talk amongst themselves. During the proposed study, in addition to programs, all attendees will also be given flyers with the following recruitment advertisement. Here is some proposed flyer text:

"THANK YOU for participating in this year's Gravesend Inn! We hope you enjoyed your visit! We work hard to improve our audience's experience, and this year, we are conducting a research study to examine emotional reactions to unusual experiences. Down the hall, in a separate facility within our department, we are conducting research right now and we are looking for adults to volunteer to participate in it. Legend has it that unusual things have happened in this room, and we are researching these phenomena. If you are over the age of 18 and would like to experience another unusual event this evening, please see one of the ushers at the exit of the theater. The ushers will introduce you to the research personnel and you will be given further instructions. This study is completely voluntary and if you decide to participate, you may stop at

any time, for any reason, without penalty. There is no benefit or cost if you participate. Thank you!"

In addition to receiving this flyer, a trained volunteer research assistant will serve as a recruiter for our study. S/he will approach participants as they exit the theater and read the above text in an effort to recruit participants.

As a result of this recruitment procedure, it is not possible to guarantee equal numbers of male and female participants, or participants of specific ages. All participants will be self-selected and will have experienced the Gravesend Inn attraction without harm (as evidenced by their apparent physical and psychological condition as they speak with the ushers and research personnel to indicate that they are interested in participating in the study).

The Gravesend Inn is designed to evoke feelings of fear and surprise. Thus, it is highly unlikely that these participants will find the experimental stimuli (hearing the story of a professor's murder) more fearful. The experimental story and its presentation are far less severe than anything shown in the Gravesend Inn. However, Wiseman et al. have found that in previous research where effects of infrasound were discovered, it was necessary for research participants to be "primed" with some recent exposure to unusual stimuli or information about such stimuli. These participants' successful completion of the "Haunted Hotel" attraction constitutes this needed priming. At this time, there is insufficient research to explain the mediating role of this priming in the infrasound effect.

Participants will be randomly assigned to the experimental or control group. Specialized show control software will be used to uniformly time and precisely synchronize all the elements of the presentation. In this way, we can ensure that each participant experiences precisely the same show, leaving the only variable to be the presence or absence of generated infrasound.

Question #3: *Provide a description of the procedures to be followed. If available include copies of questionnaires and/or interview protocol, or a sufficiently detailed description of the measures to allow the IRB to understand the nature of subjects' involvement.*

The procedures for the proposed study will begin at the recruitment location, inside the Voorhees Theater, where interested volunteers will present themselves to the event ushers. Specially trained entertainment technology volunteer research personnel will be waiting just outside the theater exit to accept volunteers from the ushers. The research personnel will tell interested potential volunteers that "legend has it that unusual things have happened in one of our department facilities, and we are researching these phenomena." S/he will then ask each person who indicates interest whether or not s/he is 18 years old and understands that s/he is agreeing to participate in a research study. S/he will ask whether or not the person feels well physically and emotionally after his/her Gravesend Inn experience. The research assistant will

say that there are no benefits or costs associated with participation and that more detailed, written information will be provided in the experimental facility where they will be asked to sign an informed consent form. The personnel will then ask each interested person, "Would you like to participate in our study?" If the answer is "yes," the student personnel will lead the recruited participants down the hallway of the first floor of the Voorhees Building to our department Lighting or Sound Labs. These are large classrooms just outside of the department's scenic construction shop, where the experiment will take place. Research personnel will be instructed to wait for groups of between three (3) and fifteen (15) participants for each experimental session; groups larger than this cannot be safely accommodated inside the scenic construction shop.

While inside one of the waiting rooms, another trained volunteer research attendant, who will handle the paperwork during experimental sessions, introduces himself/herself to the recruited participants, welcomes them to our study, and thanks them for their interest in participating. S/he will then hand out informed an informed consent form to each participant and ask that they be read and signed. S/he will also ask each participant to write down his/her email address only, without a name or other identifying information, on a slip of paper and then place this slip of paper into a plain box with a slit cut into its top. (This box will contain only email addresses of all participants and these email addresses will be used to distribute the debriefing form after the conclusion of the study. In this way, email addresses will never be in any way associated with data, consent forms, or any identifying information.) The attendant will answer questions and release any participant who decides not to participate. Once all forms have been signed and collected, the attendant will indicate that the experiment will commence. A third research assistant will arrive, who will conduct the actual experimental sessions. S/he will open the door to the scenic construction shop and will escort all participants inside.

The shop will be dimly lit and participants will be safely escorted to the center of the room. In plain view will be various construction equipment and supplies, including (disabled) saws, work tables, (safely) stacked lumber and bins for materials. It should be clearly noted that all power equipment will be safely disabled and all supplies safely stored out of the reach of participants. Participants will be placed where they cannot touch the equipment or supplies. The research attendant will instruct participants not to touch anything inside the room and not to talk during the experiment.

Once stationed at the appropriate location in the center of the shop, participants will see a simple black, plastic cart. On the cart will be a computer terminal and speakers. The research attendant will press a button on the computer that will initiate the playback of a recorded presentation by a professional storyteller. We propose the presentation as follows:

“Hi, I'm Dr. Findler, Chair of the History department here at City Tech. And I'd like to personally thank you for participating in our study. Faculty and students have reported strange experiences in this room, and we are trying to get to the bottom of the situation. I'm going to tell you a little of the history of City Tech, and of this building. Afterward, we're going to ask a few questions about your experiences here. This should only take a few minutes, so let's get started.

In 1946, New York Governor Thomas E. Dewey proposed legislation to assist GI's returning from World War II, and this legislation provided funding for several experimental institutes, including the predecessor to what we know today as City Tech. The story has been told that in 1948, the room in which you are standing was a woodworking shop, where students learned basic construction techniques, and this shop was overseen by Professor Wiseman, the school's beloved carpentry instructor. Professor Wiseman was alone working on some paperwork late on Halloween eve. Tragically, students reporting for class the next morning discovered Dr. Wiseman's body--he had been murdered!

Rumors persist to this day that the last person seen entering the shop that fateful Halloween eve was a shell-shocked WWII veteran named Sergeant Angliss, who was very angry about a grade. Sergeant Angliss was reported to have escaped into the underground Con Ed tunnel that runs beneath this very floor, and was never seen again. Students and professors working in this space late at night often report unusual experiences. Have you noticed anything?”

At this moment, the lights will go out. After five to ten seconds, the lights will be restored to their original, dim level. Then, the storyteller's voice will continue,

“Thank you for your participation! My assistant will now show you back out to the other room where you can fill out a brief questionnaire.”

The volunteer attendant will lead the participants back out into an adjacent room, just outside the construction shop. There, they will complete the questionnaire. Here is a proposed questionnaire:

New York City College of Technology
Research Study Questionnaire

Title of Study: Emotional Effects of an Unconventional Historical Environment in a Live Entertainment Event

Principal Investigator: Toija A. Riggins, Ph.D.

New York City College of Technology Department: Entertainment Technology

New York City College of Technology Phone number: 718-260-5588

Email Address: triggins@nyc.rr.com; jhuntington@CityTech.cuny.edu

Co-Investigators: John Huntington, Professor

Thank you for participating in our study. Please complete the following questionnaire by thinking about how you felt while you were in the experiment. Please rate your emotions on the following scales. Circle the number that best reflects how you felt.

<i>Happy</i>					<i>Sad</i>
1	2	3	4	5	
<i>Aroused</i>					<i>Sleepy</i>
1	2	3	4	5	
<i>Excited</i>					<i>Bored</i>
1	2	3	4	5	
<i>Angry</i>					<i>Calm</i>
1	2	3	4	5	
<i>Confident</i>					<i>Fearful</i>
1	2	3	4	5	

Please describe any unusual experiences you noticed during the experiment.

Thank you for participating in our study!

After they have turned in their questionnaires to the attendant, s/he will inform them that the experiment has ended and their participation is finished. S/he will give each participant the following exit form. This is NOT the debriefing form. Because there is a great deal of social interaction during the *Gravesend Inn*, it is highly likely that participants' responses would be adversely affected by information about the study from other participants. Therefore, participants will be fully debriefed via email at the conclusion of the study in its entirety, after the closing of the *Gravesend Inn* attraction. Please see the debriefing form that follows in answer to question #6.

New York City College of Technology

Post-Experimental Session Information

Social Behavioral Exit Form (NOT DEBRIEFING FORM)

Title of Study: Emotional Effects of an Unconventional Historical Environment in a Live Entertainment Event

Principal Investigator: Toija A. Riggins, Ph.D.

New York City College of Technology Department: Entertainment Technology

New York City College of Technology Phone number: 718-260-5588

Email Address: triggins@nyc.rr.com; jhuntington@CityTech.cuny.edu

Co-Investigators: John Huntington, Professor

Thank you very much for your participation in our study. The researchers want to give you more details about this study, and what took place in this session. However, other people who want to take part in the experiment will want to know all of its details even before they participate. If they know about the details of the study, it will influence their responses and the results of the study will be spoiled. Therefore, we ask that you not tell anything that happened, and once the study is over, each participant will receive an email with detailed information about what took place here, and how you can find out about the study's results. In the meantime, please do not talk with others about this study. If you have any questions or concerns, you can contact study researcher, Professor John Huntington at jhuntington@citytech.cuny.edu or (718) 260-5588 or Jean E. Kubeck, Ph.D., Vice Chair, Institutional Review Board at JKubeck@citytech.cuny.edu or 1-718-260-5081.

Question #4: Describe any potential harms or benefits to be derived by subjects, with a discussion of the risk/benefit ratio. For approval of any study with more than minimal risk, the benefits must clearly be shown to outweigh the risk. Describe how the study may expose participants to stress, physical, psychological or interpersonal hazard, including the possibility of pain, injury, disease, discomfort, embarrassment, worry or anxiety.

This study poses no risks greater than those of everyday life in New York City. Participants would be exposed to two important stimuli in the proposed experiment: low frequency sound (infrasound) and playback of the story of a professor's murder.

Low frequency sound, infrasound, is all around us: in weather, surf, construction, etc. A typical city dweller (our participant population) is constantly exposed to infrasound far in excess of what we are proposing, from subways, trains and car traffic passing over bridges, etc.

For guidance, we will be generating infrasound levels far below what is allowable by the Occupational Safety and Health Administration (OSHA), the federal agency mandated to assure safe and healthful working conditions. Under OSHA's noise exposure limits (see http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9735), the shorter the exposure to noise, the higher the permissible level. The shortest time increment that OSHA references is fifteen minutes, and our experimental infrasound exposure will last no more than five. For fifteen minutes of exposure, OSHA allows up to 115 dB SPL, A weighting. In our testing, we found that infrasound levels at 19 Hz approaching even 100 dB were quite obvious, so we will be staying well below even that level, and far, far below OSHA's permissible noise exposure limits.

With respect to anxiety, participants in the proposed study would all be recruited from those who have already experienced the *Gravesend Inn* "haunted hotel" attraction just before their participation in our study. That attraction is designed specifically to induce great fear and surprise. The recorded presentation of the alleged murder of a college professor in our experiment will be far less emotionally arousing than the anxiety-provoking effects found inside the *Gravesend Inn*, so those who agree to participate in our study already will have "survived" a much more fearful set of events. Nonetheless, our research attendants will be trained to watch carefully for signs of physical and emotional distress. Any participants who appear to be under any stress will be released from the study immediately. The attendant will also have the ability to completely abort the presentation if it becomes necessary for any reason. Further, anyone showing signs of stress will be directed to the faculty and security personnel in charge of the *Gravesend Inn* in the Voorhees lobby, where they can receive immediate assistance. The following written information will also be provided to any participant in need of assistance:

The following resources are available to anyone who has participated in this study:

If you are a City Tech student:

Counseling Services Center

Namm Hall (N-108),
Director: Cynthia Bink
Phone (Namm): 718.260.5030

Office Hours

M **T** **W** **TH** **F**
9:30AM – 9:30AM – 9:30AM – 9:30AM – 9:30AM –
4:30PM 4:30PM 6:30PM 4:30PM 3:00PM

If you live in one of the five boroughs of New York City:

Mental Health Services -- sliding scale

Sidney Hillman	212.633.0800	
Phillips Family Practice	212.206.5200	
Bellevue Walk-in Psych Clinic	212.562.4721	
New York Alcoholics Anonymous	212.647.1680	
Brooklyn Psychiatric Centers (free or sliding scale)	718.875.5625 718.769.4344 718.453.2277 718.875.7510	Williamsburg Flatbush Bushwick Brooklyn Heights
LifeNet - Mental Health Crisis Hotline	800.LIFE.NET 877.298.3373 877.990.8585 212.982.5284	English Spanish Mandarin or Cantonese TTY
Renfrew Center of NY	212.685.6856	Residential Eating Disorder Center
National Assoc. for Anorexia Nervosa	847.831.3438	
Brooklyn Community Counseling Center	718.338.4622	Brooklyn
Fordham Tremont Community MH Center	718.960.0300	Bronx
Long Island Consultation Center	718.896.3400	Long Island
Metropolitan Center for Mental Health	212.864.7000	
New Hope Guild Center	718.252.4200	sliding scale - 30-65\$
Staten Island Mental Health Society	718.442.2225	sliding scale - 15-75\$
Project Help	212.238.7777	Disabilities, Homeless
Riverhead Mental Health Center	516.852.1440	Riverhead, Long Island
Services for the Underserved	718.636.5914	Brooklyn
Soundview-Throgs Neck Community MH Center	718.904.4400 718.931.7301	Bronx
Suicide Hotline	212.532.2400 212.673.3000	helpline - 9-5 Samaritans of NY, 24h services
Alfred Adler	212.777.9492	Manhattan
FEGS Manhattan Clinic	212.366.8289	Manhattan, incl. employment services
Reik Clinical Center for Psychotherapy	212.924.7440	
Jeann Linsley (mental health)	212.712.9430	

Question # 5: *Describe the specific methods by which confidentiality and anonymity will be protected, including the use of data coding systems, how and where data will be stored and who will have access to it, and what will happen to data after the study has been completed.*

Only two pieces of personal information will be collected from participants in this study. The first is each participant's printed name and signature that will reside on each informed consent form. The second is an email address for each participant. Before participating in the study, each participant will be asked to write down his/her email address on a clean piece of paper that will not be connected to any other data or records; each participant will anonymously place this piece of paper into a plain box with a slot cut into its top. These email addresses will be retrieved only upon completion of the entire study and will be used to send debriefing forms to each participant. No other personal information will be collected about participants in this study.

Because discussion among respondents would taint our results, participants must be debriefed at the end of the proposed research study, rather than after each experimental session. As a result, we must have a method of tracking each participant's data so that we can remove those data from the sample, if s/he requests this after debriefing. Therefore, although names will never be placed anywhere on the questionnaires, each questionnaire will be assigned a number of 1-200 and this number will be placed on the informed consent forms of the appropriate respondents. All informed consent forms and questionnaires will be filed separately. If, after receiving our debriefing form via email, a participant requests that his/her data be removed from the sample, we will retrieve that participant's informed consent form and locate his/her questionnaire number. We will then locate this questionnaire and destroy it. Under no other circumstance will informed consent forms and questionnaires ever be matched.

For each session, the show control software used to manage the infrasound exposure and show playback will generate and record in a database a unique alphanumeric code. The code will be displayed on the attendant's control screen and record (privately) in the database whether the infrasound was on or off for the trial, and also the date, time, and other similar information. During the experiment, an attendant will write the unique code on the survey forms. At the conclusion of the experiment, the researcher can compare the trial code number with the database, and determine whether each session is a treatment or control group trial.

The only printed records in this study will be the consent forms, the emails for post-experiment debriefing, and the completed questionnaires, and these will be kept privately in a locked file cabinet accessible only by the researchers. The informed consent forms will be kept in a separate file from the questionnaires. They will be kept there for a period of three years and then they will be destroyed. Participants *will not* be identified in any report or publication about this study. Once entered and processed, electronic data will be stored in a password-protected external hard drive, accessible only by the researchers. They will be stored on this device for a period of three years and then they will be destroyed.

On March 11, 2010, the City Tech Office of Assessment and Institutional Research (AIR) provided training for a new online survey development system it is now offering at the college. This system allows for surveys to be developed not only for online administration, but also for ease of scanning results after respondents complete paper surveys. Toija Riggins attended this training and spoke with the staff of AIR about how the proposed questionnaires from this study, once completed, might be scanned for accuracy of data entry. At the time of the training AIR staff were not yet aware of whether the IRB would grant approval for the use of its technology in research at City Tech. We would appreciate the advice of the IRB about whether this technology would be acceptable and appropriate for the research we propose here.

Question #6: *If applicable, provide the following: (1) a description of the debriefing procedures to be used in cases where deception has occurred; (2) a statement describing what actions you will take should the research reveal the possibility of a medical or other potentially troubling condition.*

Because there is a great deal of social interaction during the Gravesend Inn attraction, it is very likely that information about the study from those who participate would taint the responses of other potential subjects. Therefore, we propose to delay debriefing until the entire study is concluded rather than after each experimental session. As a result, participants at the end of each session will receive the “exit” form, cited above, rather than the complete debriefing form that follows here. This debriefing form will be emailed to each participant, using the email addresses they provided anonymously during their participation. (See form, next page.)

New York City College of Technology

Social Behavioral Debriefing Form

Title of Study: Emotional Effects of Infrasound in a Live Entertainment Event

Principal Investigator: Toija A. Riggins, Ph.D.

New York City College of Technology Department: Entertainment Technology

New York City College of Technology Phone number: 718-260-5588

Email Address: triggins@nyc.rr.com; jhuntington@CityTech.cuny.edu

Co-Investigators: John Huntington, Professor

What is the purpose of this form?

You are receiving this information because you participated in an experiment of the Entertainment Technology Department at the New York City College of Technology during its annual *Gravesend Inn* “Haunted Hotel” attraction. When you participated in the experiment, there was important information the researchers could not tell you without risking spoiling the results of the study. You were promised detailed information about the complete purpose and procedures of the study once the study was concluded and this notice will provide that information.

What was the purpose of the experiment?

At the beginning of the experiment, the researchers only gave you a brief idea of what the experiment's purpose was. Sometimes when researchers are studying peoples’ ideas or behavior, they don't give a full description of what they are interested in studying. This is because having information about a study can sometimes influence the way a person thinks or behaves in that study. This influence would prevent truthful responses and spoil research results. To avoid this, the researchers in this study told you that they were studying “how groups of people react emotionally in one of our department’s facilities, an unusual, historic environment. It has been shown previously that people experience unusual phenomena in this facility.” In fact, the purpose of the study was to study how people emotionally react to an unusual event in the presence or absence of sounds below the human hearing range, which are called infrasound. . The researchers wanted to see whether or not people were more emotionally uncomfortable when infrasound was present than when it was absent while those people were experiencing an event they thought was unusual.

What really happened in this experiment and what is the justification for it?

Infrasound includes sound waves below 20 Hz and is below the human hearing range, so although people can't hear it, they can sometimes "feel" it. The researchers generated a 19 Hz sound wave during the experiment for one-half of the people who participated and did nothing for the other half. This infrasound was playing while the story of an unusual event, a college professor's murder, was being told by the pre-recorded voice of a storyteller. No college professor was killed; and we are aware of no unusual events in the room where the experiment took place. These were conditions the researchers created to make the situation believable to you. When the infrasound was turned on was completely random, like flipping a coin. Neither you nor the researchers knew when the infrasound was on or when it was off. This made sure that no one had any extra clues about how to behave in the experiment that would spoil the results. In the United Kingdom, researchers have found that people report feelings of being "uneasy" around infrasound, and have found that it is present in places that people believe are "haunted." The research you were involved in was trying to find out whether having infrasound would make events inside the *Gravesend Inn*, "Haunted Hotel" even more dramatic.

How will your privacy be protected?

The only personal information that that was collected about you in this study was your name on the bottom of the informed consent form and an email address you provided in a separate box located on a nearby table inside the waiting room. The questionnaire is completely confidential. The records of this study will be kept private. The data will be kept in a locked file cabinet accessible only by the researchers. They will be kept there for a period of three years and then they will be destroyed. Participants *will not* be identified in any report or publication about this study.

What are your rights?

If you feel concerned or uncomfortable about the fact that you were intentionally deceived, you may tell us to withdraw your data from the sample. If participating in this experiment or knowing that you have been deceived has caused sufficient distress that you wish to speak with someone, you may contact:

If you are a City Tech student:

Counseling Services Center

Namm Hall (N-108),
Director: Cynthia Bink
Phone (Namm): 718.260.5030

Office Hours

M T W TH F

Namm Hall N-108

9:30AM – 9:30AM – 9:30AM – 9:30AM – 9:30AM –
4:30PM 4:30PM 6:30PM 4:30PM 3:00PM

If you live in one of the five boroughs of New York City:

Mental Health Services -- sliding scale

Sidney Hillman	212.633.0800	
Phillips Family Practice	212.206.5200	
Bellevue Walk-in Psych Clinic	212.562.4721	
New York Alcoholics Anonymous	212.647.1680	
Brooklyn Psychiatric Centers	718.875.5625	Williamsburg
(free or sliding scale)	718.769.4344	Flatbush
	718.453.2277	Bushwick
	718.875.7510	Brooklyn Heights
LifeNet - Mental Health Crisis Hotline	800.LIFE.NET	English
	877.298.3373	Spanish
	877.990.8585	Mandarin or Cantonese
	212.982.5284	TTY
Renfrew Center of NY	212.685.6856	Residential Eating Disorder Center
National Assoc. for Anorexia Nervosa	847.831.3438	
Brooklyn Community Counseling Center	718.338.4622	Brooklyn
Fordham Tremont Community MH Center	718.960.0300	Bronx
Long Island Consultation Center	718.896.3400	Long Island
Metropolitan Center for Mental Health	212.864.7000	
New Hope Guild Center	718.252.4200	sliding scale - 30-65\$
Staten Island Mental Health Society	718.442.2225	sliding scale - 15-75\$
Project Help	212.238.7777	Disabilities, Homeless
Riverhead Mental Health Center	516.852.1440	Riverhead, Long Island
Services for the Underserved	718.636.5914	Brooklyn
Soundview-Throgs Neck Community MH Center	718.904.4400	Bronx
	718.931.7301	
Suicide Hotline	212.532.2400	helpline - 9-5
	212.673.3000	Samaritans of NY, 24h services
Alfred Adler	212.777.9492	Manhattan
FEGS Manhattan Clinic	212.366.8289	Manhattan, incl. employment services
Reik Clinical Center for Psychotherapy	212.924.7440	
Jeann Linsley (mental health)	212.712.9430	

Who else can I contact with concerns or questions about this study?

This study was granted clearance by the Institutional Review Board of the New York City College of Technology, City University of New York. If you have any complaints, concerns, or questions about this research, or want to learn more about its results, please feel free to contact

researcher Professor John Huntington at jhuntington@citytech.cuny.edu or (718) 260-5588. Any ethical concerns about the study may be directed to:

Jean E. Kubeck, Ph.D. , Vice Chair, Institutional Review Board
New York City College of Technology
300 Jay Street
Brooklyn, NY 11201
1-718-260-5081

You may also find it interesting to follow this link to a study on emotions and infrasound that was conducted in the United Kingdom and formed the basis of this research:

<http://www.spacedog.biz/extras/Infrasonic/infrasonicResults.htm>

Thank you for helping us in this research!

Question #7: *Before submitting this application, all investigators should familiarize themselves with the discussion of informed consent contained in pages 17-21 of the PI Manual. Describe the oral and written consent processes and attach all consent documents, including scripts for oral consent and assent form for research involving minors ages 12-17. When the consent form to be used will be in a language other than English, an English translation must be provided. Unless one or more of the required elements described below is explicitly waived by the IRB, informed consent documents should contain:*

- A. A fair explanation of the purposes of the research and the expected duration of the subject's participation, a description of the procedures to be followed, and the identification of any procedures which are experimental;*
- B. A description of any possible discomforts and risks reasonably expected. This includes any potential financial risks that could ensue;*
- C. A description of any benefits reasonably expected;*
- D. A disclosure of any appropriate alternative procedures;*
- E. A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled;*
- F. An offer to answer an inquiries concerning the goals of the research or the research procedures and to provide a summary of results upon request and an explanation of whom to contact for answers to pertinent questions about the research and research subjects' rights, and whom to contact in the event of a research-related injury to the subject;*
- G. An instruction that the subject is free to withdraw or discontinue participation at any time without prejudice.*
- H. A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained; and*
- I. Provisions for parent or guardian approval for participation of minors or for subject from vulnerable populations when appropriate.*

The consent process will begin at the recruitment location, once those who have completed viewing the Gravesend Inn have indicated to theater ushers that they are interested in participating in the experiment they saw advertised in the program flyer. Specially trained entertainment technology volunteer research personnel will be waiting just outside the Voorhees Theater exit to accept volunteers from the ushers. The research personnel will tell

interested potential volunteers that “legend has it that unusual things have happened in one of our department facilities, and we are researching these phenomena.” S/he will then ask each person who indicates interest whether or not s/he is 18 years old and understands that s/he is agreeing to participate in a research study. S/he will ask whether or not the person feels well physically and emotionally after his/her *Gravesend Inn* experience. The research assistant will say that there are no benefits or costs associated with participation and that more detailed, written information will be provided in the experimental facility where they will be asked to sign an informed consent form. The personnel will then ask each interested person, “Would you like to participate in our study?” If the answer is “yes,” the volunteer personnel will lead the recruited participants down the hallway of the first floor of the Voorhees Building to our department’s Light or Sound labs. While inside a waiting room, another trained volunteer research attendant, will introduce himself/herself to the recruited participants, welcome them to our study, and thank them for their interest in participating. S/he will then hand out an informed consent form to each participant and ask that they be read and signed. (See form, next page.)

New York City College of Technology
Consent to Participate in a Research Study
Social Behavioral Consent Form

Title of Study: Emotional Effects of an Unconventional Historical Environment in a Live Entertainment Event

Principal Investigator: Toija A. Riggins, Ph.D.

New York City College of Technology Department: Entertainment Technology

New York City College of Technology Phone number: 718-260-5588

Email Address: triggins@nyc.rr.com; jhuntington@CityTech.cuny.edu

Co-Investigators: John Huntington, Professor

What are some general things you should know about research studies?

You are being asked to take part in a research study. To join the study is voluntary.

You may refuse to join, or you may withdraw your consent to be in the study, for any reason, without penalty, at any time.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

What is the purpose of this study?

The purpose of this research study is to learn about how groups of people react emotionally in one of our department's facilities, an unusual, historic environment. It has been shown previously that people experience unusual phenomena in this facility. Conducting this study will help us understand exactly what takes place and how people feel about what they experience. You are being asked to be in the study because you have just experienced the Entertainment Technology Department's annual Gravesend Inn "Haunted Hotel" attraction and are familiar with the unusual phenomena that exist there.

How many people will take part in this study?

If you decide to be in this study, you will be one of approximately 200 people in this research study.

How long will your part in this study last?

Your total participation in this experiment will take no longer than 10 minutes.

What will happen if you take part in the study?

You will be asked to enter a separate department facility from the Voorhees theatre. Once inside, you will be asked not to speak to other participants at any time during the experiment. A brief presentation about our facility will be given to all participants as a group. After the presentation has ended, you will be asked to complete a short questionnaire. Once you have completed the questionnaire, your participation in the study will be finished.

What are the possible benefits from being in this study?

Research is designed to benefit society by gaining new knowledge. You may not benefit personally from being in this research study, although you might find the brief presentation entertaining.

What are the possible risks or discomforts involved from being in this study?

There are no known risks to this experiment, but there may be uncommon or previously unknown risks. These could include feeling anxious or upset during the experiment or afterward. You should report any problems to the attendant who will be with you at all times. You are free to leave at any time without penalty. If you feel you need assistance, we will provide it for you. You will not be left alone.

How will your privacy be protected?

The only personal information that will be collected about you in this study is your name on the bottom of this form and an email address you provide in a separate box located on a nearby table inside this waiting room. The questionnaire is completely confidential. The records of this study will be kept private. The data will be kept in a locked file cabinet accessible only by the researchers. They will be kept there for a period of three years and then they will be destroyed. Participants *will not* be identified in any report or publication about this study.

What if you want to stop before your part in the study is complete?

You can withdraw from this study at any time, without penalty. If you wish to stop your participation, simply notify the attendant and you will be free to leave. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

Will you receive anything for being in this study?

You will not receive anything for taking part in this study.

Will it cost you anything to be in this study?

There will be no costs for being in the study

What if you are a City Tech student?

You may choose not to be in the study or to stop being in the study before it is over at any time. This will not affect your class standing or grades at The New York City College of Technology. You will not be offered or receive any special consideration if you take part in this research.

What if you are a City Tech employee?

Taking part in this research is not a part of your duties at City Tech, and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

What if you have questions about this study?

You have the right to ask, and to have answered, any questions you may have about this research. If you have questions, complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form. You may also ask for a summary of the results of the study once it has concluded for the entire semester.

What if you have questions about your rights as a research participant?

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact:

Jean E. Kubeck, Ph.D.

Vice Chair, Institutional Review Board
New York City College of Technology
300 Jay Street
Brooklyn, NY 11201
1-718-260-5081

Question #8: *Please provide any other information that might be pertinent to the IRB's decision.*

We propose conducting a pilot test of this experiment during the spring 2010 semester using student volunteers from the Introduction to Entertainment Technology classes. The class instructors would solicit volunteers by indicating that this is a study being conducted by a fellow student and a faculty member in the department. They would be given the same informed consent form, given the "exit form," and would be fully debriefed at the end of the study, just like the potential participants in the proposed research during the fall 2010 semester. No class credit or other benefits would be given to any volunteers and no penalties would result from refusing to participate. The experiment would be conducted in room V014, rather than in the scenic construction shop, because the shop would not be available during this time. Room V014 is a department classroom; the exact same equipment and procedures would be used.

Also, Toija Riggins plans to graduate from City Tech in June 2010 and will return as a volunteer researcher to conduct the proposed study during the Gravesend Inn run in fall 2010. She will conduct the pilot test this spring while she is enrolled. Please advise whether Principal Investigator status should be given to her or to Professor John Huntington and what legal or ethical ramifications, if any, this has for conducting the study.