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Arizona State University Narrative Networks (N2) – Pre-Award Progress, Status and Management Report Quarterly Progress Report

Period Covered by the Report April 1, 2012 through June 30, 2012 (Pre-Award)

July 15, 2012:

Project Title: Toward Narrative Disruptors and Inductors: Mapping the Narrative Comprehension Network and its Persuasive Effects Contract/Grant Number: D12AP00074 Total Dollar Value: \$6,081,622.00 Program Manager: Dr. William Casebeer, DARPA

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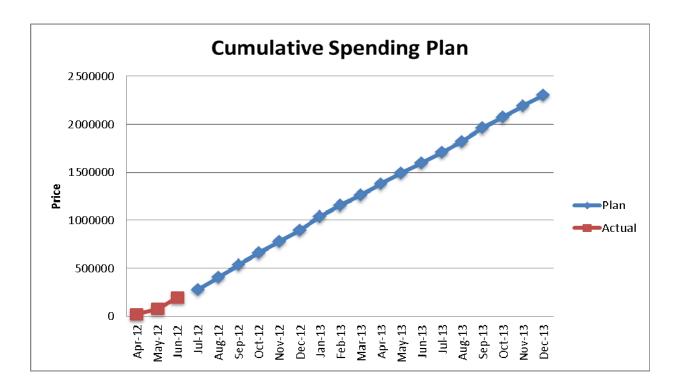
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Security Classification – Unclassified Do not mark document as confidential or business proprietary.

Technical Information – Financial Management

1. Technical Progress / Quarterly Expenditure Report (Please provide cumulative spending graph).

Figure 1. Cumulative Spending Plan



Please provide Pre-award schedule of tasks and events for this report period, with financial expenditures broken down by task.

- Task 1.1 Startup task \$102,280.75
- Task 1.2 Narrative Stimuli \$59,086.05
- Task 1.3 Persuasion Protocol
- Task 1.4 Multi-model imaging
- Task 1.5 Knowledge Capture and Write results
- Task 1.6 Progress report \$28,624.71
- Task 1.7 Travel \$8,398.85

Total expenditures for the reporting period - \$198,390.35 (estimated)

Actual Cost versus Planned Costs

	Current Cost (\$)	Total Phase 1 Cost (\$)
Plan	\$ 0	\$2,303,196
Actual	\$198,390.35	
Difference	\$198,390.35	

2. Technical Progress / Highlights - Observations

Task 1.1 Startup

1.0 Contract. The contract with the Department of Interior was signed at the last minute before spending preauthorization ran out. Now that the contract is signed we are working on a budget modification proposal (see 3).

1.1.1 Hiring

Neuropsych Postdoc. The Neuroscience Team advertised broadly for a postdoctoral research fellow with multimodal neuroimaging experience. We received 12 applications and ranked these in order to develop a set of three candidates for further consideration. In the process of ranking these candidates our team was alerted to a postdoctoral student at the City College in New York (Jacek Dmochowsi, Ph.D.) who was actively searching for a new position. Because his experience and qualifications so greatly exceeded the others in the pool we closed the search and pursued a targeted hire of Jacek as an Assistant Research Professor. Unfortunately he declined our offer so we are still searching for this position.

Persuasion Postdoc. The Persuasion Team advertised broadly for a postdoctoral research fellow with expertise in narrative persuasion. We received 14 applications. We offered the position to Douglas Deiss from ASU. He accepted and started work on June 27.

Narrative Team. Hiring of two half-time graduate research assistants and four quartertime undergraduate student workers and creative director consultant, is complete.

Graduate Research Assistants. We have hired three graduate research assistants, to support the neuropsych, narrative, and persuasion teams, respectively.

1.1.2 Design Experiments. The entire grant team has held six day-long to half-day meetings devoted in part to design of the experiments. Discussions have focused on modifying the design to accommodate an additional "neutral" religious group, and how to marry the neurological measurements with the persuasion measurements in order to minimize measurement fatigue or response sets on the part of the subjects.

1.1.3 Human Subjects. We prepared and submitted the first of two IRB applications to ASU. The first covers research to guide development of our stimulus videos. It was approved by ASU with exempt status. It has since been submitted to MRMC for secondary review and we are awaiting the outcome. We are preparing the second IRB submission, to cover the neuropsychology and persuasion experiments. This is a more complex application that will require approval also by BNI, and that we expect will not have exempt status.

Task 1.2 Design Narrative Stimuli

Initial story development involved researching mutually exclusive Christian and Muslim master narratives, developing local narrative scenarios, and conceptualizing how the videos fit into the overall experimental design. Primary (2 each) and alternate (1 each) master narratives for each cultural tradition have been selected, allowing local narrative story development to proceed. Furthermore, details about the interrelationship of individual videos (episodic, serialized, entirely independent) have been resolved.

3. Results or Problems and Solutions

- a) Budget & contract. Per discussion with the PO team at the Jackson Hole conference, we intend to request a budget modification. This would include plus-up funds for better EEG equipment, additional salary for the neuropsych ARP position, and funds to add additional subjects from a neutral religion (Hindu) to the design. In addition some technical changes are needed in the existing contract. We plan to submit a revision proposal before the end of July.
- b) Hiring. Jacek's recruiting and eventual decline of our offer put us behind our desired progress for hiring the neuropsych position. We have re-advertised the assistant research professor job and expanded distribution of the job add to relevant engineering outlets.
- c) Human subjects.
 - i) The second human subjects application is more complex because it will have to be approved in primary review by two institutions (ASU and BNI). It will also have to seek approval for simultaneous fMRI/EEG analysis which carries risks of burns caused by electrodes. We are seeking input from manufacturers of the planned EEG system on best practices that can be used before we complete applications to the local IRBs.
 - ii) MRMC secondary review timeline remains unknown, and therefore is a threat to the project schedule. We will soon be ready to do some pretesting on the stimulus materials and will be unable to do so until our application is approved.
- d) Stimulus materials development
 - Mutually Exclusive Master Narratives. Since the experimental design calls for manipulation of vertical integration between the local narratives presented in the videos and pre-existing cultural narratives known by the subject population, selecting appropriate cultural master narratives to serve as templates for the local narratives is crucial. Furthermore, the master narratives drawn from Muslim and Christian cultures must be mutually exclusive so that the experimental design can yield differential results. Identifying mutually exclusive master narratives requires a two-step solution, the first of which was accomplished in this reporting period. Consultation with CSC scholars with expertise in religious narratives identified a candidate pool of master narratives from Muslim and Christian traditions that should prove mutually exclusive. The second step is a confirmatory step of analysis of audience response through beta-testing the stories with a sample subject population, to be conducted in July-Sep reporting period.
 - ii) Persuasion fatigue. During story development and conceptualization, a potential problem was identified with regard to the persuasion outcomes study of the local narratives in the scanner. As originally conceived, the experimental design called for a behavioral action measure following each video. However, in consultations between the Narrative Team and the Persuasion Team, concern that persuasion fatigue (artificial answers induced by the excessive repetition of behavioral action questions) would negatively affect the data. The solution is to group the videos in sets of three that share a common thematic link. Each group of three stories will be followed by a single behavioral action measure, reducing the number of these questions from 18 (one per video) to 6 (one per set of three)

maintaining the number of iterations required for fMRI/EEG signal, but mitigating the potential for persuasion fatigue.

4. Significant Accomplishments Anticipated During Next Reporting Period

- 1) Revised budget submitted and accepted
- 2) Neuropsych ARP hired
- 3) First human subjects application received secondary approval
- 4) Second human subjects application submitted
- 5) Comprehensive review of narrative persuasion literature completed
- 6) All stories developed and videos scripted
- 7) Representative sample of videos pre-tested with sample subject pool:
 - a) Confirm mutual exclusivity of master narratives
 - b) Confirm comprehension of local narratives
 - c) Confirm emotional/aesthetic resonance of videos
- 8) Production style determined (live action, stills with animatics, line art animation, etc.)
- 9) Pre-production complete
- 10) Production of videos initiated
- 11) EEG system evaluated and safety-checked on site at BNI
- 12) EEG system selected and purchased
- 13) EEF/fMRI calibration and pretesting plan in place

5. Publications (relevant effort)

N/A

6. Meetings and Events (please include meetings with subcontractors if applicable)

- Jackson Hole kickoff meeting April 12-13, 2012
- Routine staff/team meetings
- Subcontractor (St. Joseph's Hospital and Medical Center) meeting April 6, 2012 and April 20, 2012
- 7. Other

N/A