

## **Institutions**

Krasnow Institute for Advanced Study (George Mason University, Fairfax, VA)

Cultural Logic LLC (Providence, RI)

## **Lead Investigators**

Giorgio Ascoli Ph.D., Professor of Neuroscience

Joseph Grady Ph.D., Co-Founder, Cultural Logic LLC

## **Current Team Members**

None so far – we are open to joining a team with complementary strengths and compatible interests

## Research areas of interest

- ... develop and test methods for automating metaphor discovery, semantic definition, mapping and categorization processes
- ... produce and compare structured representations of the shared perspectives in multiple cultures and languages
- ***Cross-cultural metaphor comparison*** as a tool for assessing commensurability of basic socio-cultural concepts (freedom, friendship, respect, support, respect, pride, success, failure, etc.)
- ***Typology of concepts*** relevant to metaphor mapping (e.g. *sensory vs. goal-related vs. superschematic*); possible correlates in neural representation
- ***Quantitative analysis of meaning*** in human communication through computer-assisted experiments and data mining of large corpora
- Neurobiologically realistic ***simulations of networks underlying higher cognition***, such as autobiographic memory retrieval by the hippocampus

## Unique qualifications and capabilities

Ascoli:

*Leading expert in computational neuroscience* with >100 publications (incl. Nature Reviews Neurosci., Behav. Brain Sci., PNAS...) and >1000 citations (incl. Nature, textbooks, Wash Post, Natl TV/radio).

Currently funded by NIH, Darpa, ONR, AFOSR, INCF (>\$1M/yr total), consultant/scientific advisor on SenseMaking IARPA grant and on cognitive mapping AFRL contract.

Founder/Director of Center for Neural Informatics, Structures, and Plasticity (~30 FTEs, including 3 tenure-lines), founding Editor-in-Chief of top Neuroinformatics journal.

Grady:

*Foremost academic expert on “primary metaphor”* – crosscultural patterns pervasive in shaping thought and language – over a dozen publications related to primary metaphor

Leading expert on metaphor more broadly – e.g. author of “Metaphor” article in *Oxford Handbook of Cognitive Linguistics*

Former faculty member at Georgetown University; University of Maryland (tenure-track)

Expertise in applying study of metaphor to analysis of public discourse on social issues – on behalf of national foundations, NGOs, legislators

## Universal (primary) vs. culture-specific metaphor

- **PRIMARY:** E.g. Difficulty as Heaviness (“workload”)
- Arabic, Basque, Finnish, Hawaiian, Japanese, Malay, Mandarin, Old Irish, Russian, Sanskrit, Swahili, Tagalog, Turkish, Zulu etc.
- Sensory (Heaviness) → Goal-related (Difficulty) :: Shared superschematic structure (Scalar Property)
- Universal correlation in experience (Interacting with heavy objects)
- Inputs to more elaborate conceptual blends (Sisyphus)
- Hypothetical: Connect distinct types of neural representation
- **CULTURE-SPECIFIC:** E.g. “ship of state,” “bonds of matrimony,” “corporate ladder”
- Typically based on Primary pattern(s) plus culturally contingent concepts, associations

## **Contact Information**

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