Allyson Ettinger

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EDUCATION

University of Maryland, College Park MD
PhD in Linguistics, in progress, August 2013 – present

Johns Hopkins University-Nanjing University Center for Chinese and American Studies, Nanjing China
Graduate Certificate in Chinese and American Studies, June 2011

Brandeis University, Waltham MA
Bachelor of Arts, Summa Cum Laude, May 2010
Double Major in Linguistics and Psychology, with Highest Honors in Linguistics
Cumulative GPA 4.0/4.0

SELECTED WORK EXPERIENCE

2011-2013 Lab Manager/Research Assistant, KIT/NYU MEG Research Lab, New York NY.

2009-2010 Researcher, Dartmouth Linguistics and Cognitive Science Program, Hanover NH/Boston MA.

2008-2010 Annotation Judge/Annotator, Brandeis Computer Science Department**,** Waltham MA.

LANGUAGES

English (native), Mandarin Chinese, Spanish (fluent), French (proficient), German, Modern Standard Arabic (reading and communicative knowledge)

OTHER SKILLS

Experience with MATLAB, Microsoft Office, R, LaTeX, Praat, Perl

HONORS AND AWARDS

Honorable Mention, National Science Foundation Graduate Research Fellowship Program, 2014

Member Phi Beta Kappa Academic Honor Society, Brandeis University Chapter

Otto Jespersen Award for Outstanding Achievement in Linguistics, Brandeis University, 2010

Justice Louis D. Brandeis full-tuition scholarship, Brandeis University, 2006-2010

Presidential Scholar, U.S. Presidential Scholars Program, 2006

PUBLICATIONS

2014 Ettinger, A., Linzen, T., & Marantz, A. The role of morphology in phoneme prediction: Evidence from MEG. *Brain and Language 129*, 14-23.

PRESENTATIONS

2013 Mandarin utterance-final particle *ba* in the conversational scoreboard. [Allyson Ettinger, Sophia Malamud]. Presented at 19th International Congress of Linguists, Geneva, Switzerland.

2013 Mandarin utterance-final particle *ba* in the conversational scoreboard. [Allyson Ettinger, Sophia Malamud]. Presented at Linguistic Society of America Annual Meeting, Boston, MA.

2013 The role of morphological structure in phoneme prediction: evidence from MEG. [Allyson Ettinger, Tal Linzen, Alec Marantz]. Poster presented at Cognitive Neuroscience Society Annual Meeting and CUNY Conference on Human Sentence Processing.

2012 Mandarin utterance-final particle *ba* and conversational goals. [Allyson Ettinger, Sophia Malamud]. Presented at NYU Semantics Discussion Group Meeting, New York, NY.

2010 Linguistic construction of gender and generations in Hmong-American communities. [Allyson Ettinger, Mai Youa Moua, James Stanford]. Presented at Linguistic Society of America Annual Meeting, Baltimore, MD.

UNOFFICIAL TRANSCRIPT + FOR ADVISING PURPOSES ONLY

E-Mail: sunyixin15@gmail.com
Graduate
Linguistics — Graduate Degree Seeking
DATE: 03/31/14 — Current Status: Registered Spring 2014

Transcripts received from the following institutions:

Brandeis University — on 11/16/12

Historic Course Information is listed in the order:
Course, Title, Grade, Credits Attempted, Earned and Quality Points

Fall 2013
LINGUISTICS — GRADUATE SCHOOL

LING610	SYNTACTIC THEORY	A	3.00	3.00	12.00	
LING640	PSYCHOLINGUISTICS	A	3.00	3.00	12.00	
LING660	INTRO TO SEMANTICS	A	3.00	3.00	12.00	

Semester: Attempted 9.00; Earned 9.00; GPA 4.000
Grad Cumulative: 9.00; 9.00; 4.000

Grad Cumulative Credit: 9.00
Grad Cumulative GPA : 4.000

**** Current Course Information ****

1401

Course	Sec	Credits	Core /Div	Grd/ Meth	Drop /Add	Add Date	Drop Date	Modified Date
LING611	0101	3.00		REG	A	12/10/13		12/10/13
LING848I	0101	3.00		REG	A	12/10/13		12/10/13
LING661	0101	3.00		REG	A	12/10/13		12/10/13
LING641	0101	3.00		REG	D	12/10/13	12/24/13	12/24/13

BRANDEIS UNIVERSITY

Official Transcript

Send To: Allyson Ettinger
NYU Department of Linguistics
10 Washington Place
New York, NY 10003
United States

Brandeis University
Waltham, Massachusetts 02453-2728

Mark S Hewitt,
University Registrar

Name : Allyson K. Ettinger
Student ID: 20286191

----- Degrees Awarded -----

Degree : Bachelor of Arts
Confer Date : 2010-05-23
Degree GPA : 4.000
Degree Honors : Summa Cum Laude
Plan : Major in Language and Linguistics with highest honors
Plan : Major in Psychology

----- Academic Program History -----

Program : Arts and Sciences
Completed Program
Language and Linguistics Major
Psychology Major

----- Beginning of Undergraduate Record -----

Fall Semester 2006

Course	Description	Attempted	Earned	Grade	Points
Transfer Credit from Brandeis University					
Applied Toward Arts and Sciences Program					
EXAM	BRG021 Spanish - FL		0.00	T	
PE	BRG002 Univ Requirement - PE-2		0.00	T	
Course Trans GPA: 0.000	Transfer Totals :	0.00	0.00		0.000
Transfer Credit from College Board /Adv. Placement					
Applied Toward Arts and Sciences Program					
2TRF	BRG004 Courses Transferred: 2	8.00	8.00	T	
EXAM	BRG014 Mathematics 10a		0.00	T	
EXAM	BRG015 Mathematics 10b		0.00	T	
Course Trans GPA: 0.000	Transfer Totals :	0.00	8.00		0.000
CHIN 10A	BEGINNING CHINESE	4.00	4.00	A	16.000
ENG 37B	MODERN DRAMA	4.00	4.00	A	16.000
LING 100A	INTRO TO LINGUISTICS	4.00	4.00	A	16.000
USEM 56B	PLACE, MEMORY&IDENTITY	4.00	4.00	A	16.000
TERM GPA : 4.000	TERM TOTALS :	16.00	16.00		64.000
CUM GPA : 4.000	CUM TOTALS :	16.00	24.00		64.000

Dean's List

Spring Semester 2007

Course	Description	Attempted	Earned	Grade	Points
CHIN 20B	CONTINUING CHINESE	4.00	4.00	A+	16.000
ECON 2A	INTRO TO ECONOMICS	4.00	4.00	A	16.000
LING 110A	PHONOLOGICAL THEORY	4.00	4.00	A	16.000
PSYC 1A	INTRO TO PSYCHOLOGY	4.00	4.00	A	16.000
UWS 2B	UNIVERSITY WRITING SEM.	4.00	4.00	A	16.000
TERM GPA : 4.000	TERM TOTALS :	20.00	20.00		80.000
CUM GPA : 4.000	CUM TOTALS :	36.00	44.00		144.000

Dean's List

Fall Semester 2007

Course	Description	Attempted	Earned	Grade	Points
CHEM 11A	GENERAL CHEMISTRY I	4.00	4.00	A	16.000
CHIN 30A	INTERMEDIATE CHINESE	4.00	4.00	A+	16.000
FA 12A	HISTORY OF ASIAN ART	4.00	4.00	A	16.000
LING 130A	SEMANTICS	4.00	4.00	A+	16.000
NPSY 22B	INTRO:COGNITIVE NEUROSCI	4.00	4.00	A	16.000
TERM GPA : 4.000	TERM TOTALS :	20.00	20.00		80.000
CUM GPA : 4.000	CUM TOTALS :	56.00	64.00		224.000

Dean's List

Spring Semester 2008

TO VERIFY: TRANSLUCENT GLOBE ICONS MUST BE VISIBLE WHEN HELD TOWARD A LIGHT SOURCE

BRANDEIS UNIVERSITY

Official Transcript

Send To: Allyson Ettinger
NYU Department of Linguistics
10 Washington Place
New York, NY 10003
United States

Brandeis University
Waltham, Massachusetts 02453-2728

Mark S Hewitt,
University Registrar

Course		Description	Attempted	Earned	Grade	Points
CHIN	40B	ADV. INTER. CHINESE	4.00	4.00	A+	16.000
LING	120B	SYNTACTIC THEORY	4.00	4.00	A	16.000
LING	190B	TOPICS:COGNITIVE SCIENCE	4.00	4.00	A	16.000
		Course Topic(s): Morphology				
PSYC	34B	SOCIAL PSYCHOLOGY	4.00	4.00	A	16.000
PSYC	51A	STATISTICS	4.00	4.00	A	16.000
		TERM GPA : 4.000 TERM TOTALS :	20.00	20.00		80.000
		CUM GPA : 4.000 CUM TOTALS :	76.00	84.00		304.000
		Dean's List				

Fall Semester 2008

Course		Description	Attempted	Earned	Grade	Points
		Transfer Credit from CET/ Beijing				
		Applied Toward Arts and Sciences Program				
CHIN		BRG001 Chinese- CC		0.00	CR	
CHIN		BRG001 Chinese- CC		0.00	CR	
CHIN		BRG001 Chinese- CC		0.00	CR	
		Course Trans GPA: 0.000 Transfer Totals :	0.00	0.00		0.000
OFFC	100	Off Campus Study	16.00	16.00	CR	
		TERM GPA : 0.000 TERM TOTALS :	16.00	16.00		0.000
		CUM GPA : 4.000 CUM TOTALS :	92.00	100.00		304.000

Spring Semester 2009

Course		Description	Attempted	Earned	Grade	Points
CHIN	120B	ADVANCED CHINESE LANG II	4.00	4.00	A	16.000
LING	140A	DISCOURSE AND PRAGMATICS	4.00	4.00	A+	16.000
LING	197A	LANGUAGE ACQUIS/DEVELOP.	4.00	4.00	A+	16.000
PSYC	21A	LEARNING AND BEHAVIOR	4.00	4.00	A	16.000
PSYC	52A	RSRCH METHODS & LAB IN PSYCHLG	4.00	4.00	A	16.000
		TERM GPA : 4.000 TERM TOTALS :	20.00	20.00		80.000
		CUM GPA : 4.000 CUM TOTALS :	112.00	120.00		384.000
		Dean's List				

Fall Semester 2009

Course		Description	Attempted	Earned	Grade	Points
ARBC	10A	INTRO: LITERARY ARABIC	4.00	4.00	A	16.000
ENG	79A	DIRECTED WRITE:BEG SCREENPLAY	4.00	4.00	CR	
LING	99D	SENIOR THESIS RESEARCH	4.00	4.00	A	16.000
PSYC	33A	DEVELOPMENTAL PSYCHOLOGY	4.00	4.00	A	16.000
		TERM GPA : 4.000 TERM TOTALS :	16.00	16.00		48.000
		CUM GPA : 4.000 CUM TOTALS :	128.00	136.00		432.000
		Dean's List				

Spring Semester 2010

Course		Description	Attempted	Earned	Grade	Points
ARBC	20B	CONTINUING LIT. ARABIC	4.00	4.00	A+	16.000
LING	99D	SENIOR THESIS RESEARCH	4.00	4.00	A	16.000
NPSY	199A	HUMAN NEUROPSYCHOLOGY	4.00	4.00	A	16.000
		TERM GPA : 4.000 TERM TOTALS :	12.00	12.00		48.000
		CUM GPA : 4.000 CUM TOTALS :	140.00	148.00		480.000
		Dean's List				

***** End of Transcript *****

TO VERIFY: TRANSLUCENT GLOBE ICONS MUST BE VISIBLE WHEN HELD TOWARD A LIGHT SOURCE

南京大学—约翰斯·霍普金斯大学中美文化研究中心

The Johns Hopkins University-Nanjing University Center for Chinese and American Studies

学生成绩单

OFFICIAL TRANSCRIPT 2010-2011

姓名 Name	孙苡欣 Ettinger, Allyson	国籍 Nationality	USA	学历 Previous Education	B.A., Brandeis University, May 2010
永久通讯地址 Permanent Address	40 Bayberry Lane, Camden, ME, 04843, USA				

FIRST SEMESTER 第一学期

课程编号 Course No.	课程名称 Course Title	周学时 H/Week	总学时 H/Total	教授 Professor	成绩 Grade
030207A54	Contemporary International Politics	3	45	Shi Bin	A
030207D52	Modern Sino—U.S. Relations	3	45	Ren Donglai	A
030207D101	International Human Rights Law	3	45	Steven Hill	A
030207D117	International Law	3	45	Li Bin Peng Yue	A-

SECOND SEMESTER 第二学期

课程编号 Course No.	课程名称 Course Title	周学时 H/Week	总学时 H/Total	教授 Professor	成绩 Grade
030207D205	Environmental Law	3	45	Wu Weixing	A
030207D83	Ethnic Minorities in Chinese Society	3	45	Hua Tao	A
030207D206	Modern Chinese Society and Culture	3	45	Li Gongzhong	A
030207D123	International Dispute Resolution	3	45	Steven Hill	A
030207D125	Applied Game Theory	3	45	P. Armstrong-Taylor	Aud

中方主任(签字)
Chinese Co-Director

无钢印无效
NOT VALID WITHOUT SEAL

美方主任(签字)
American Co-Director

日期
DATE June 21, 2011

1. 中心所授课程均为研究生课程。
2. 使用下列计分制和符号

A	Superior	特优
A-	Excellent	优
B+	Very good	良
B	Good	中
B-	Passing	及格

1. All courses taught here are graduate-level.
2. The following grades and symbols are used:

C	Failure	不及格
Aud	Audit	旁听
P/F	Pass/Fail	通过/不通过
W	Withdrawn	退出
I	Incomplete	未完成

GRE® Examinee Score Report

Note: This report is not valid for transmission of scores to an institution.

All dates are formatted as MM/DD/YYYY.

Print Date: 03/23/2014

Print

Examinee Information

Name:	Allyson K Ettinger
Address:	40 Bayberry Lane N/A Camden, ME 048434012 United States of America
Email Address:	sunyixin15@gmail.com
Phone Number:	2079756342
Date of Birth:	08/02/1987
Social Security Number:	xxx-xx-3644
Gender:	Female
Intended Graduate Major Code:	2903
Intended Graduate Major:	Humanities and Arts -- Other - Linguistics
Most Recent Test Date:	08/24/2010
Registration Number:	6852117

General Test Scores

Test Date	Verbal Reasoning*				Quantitative Reasoning*				Analytical Writing	
	Prior Format		Current Format		Prior Format		Current Format			
	Scaled Score	Estimated Current Score	Scaled Score	% Below	Scaled Score	Estimated Current Score	Scaled Score	% Below	Score	% Below
08/24/2010	620	161		87	720	156		65	5.0	93

NS — No Score. Indicates that no questions were answered.

Only reported score will be available for display.

* The GRE Verbal Reasoning and Quantitative Reasoning score scales changed in August 2011. For tests taken August 2011 or later, scores are printed in the "Current Format" columns. For tests taken before August 2011, scores on the prior scales and the corresponding estimated scores on the current scales are printed in the "Prior Format" columns.

Statement of Funding

My funding amounts to $25,000 yearly (with potential for year-to-year variation) for the duration of the five-year PhD program, drawn from a combination of Linguistics Department and University Fellowship funding for the first two years, and from Linguistics Department funding alone for the remaining three years, provided that I complete required GA/RA/TA duties. I submitted an application for the NSF Graduate Research Fellowship this year (receiving Honorable Mention but no fellowship), and I will consider reapplying for that fellowship next year.

Research Plan

To use human language is, at its most basic level, to express and comprehend meaning. However, while studies of language processing have given much attention to the manner in which language users parse and build syntactic structure, relatively little attention has been paid to how comprehenders actually construct meaning representations, in order to arrive at an interpretation. As a student of semantics, pragmatics, and language processing, I am relatively well-positioned to investigate these critical interpretive processes from a linguistically-informed perspective. Because the study of these processes can draw important insight from instances in which interpretation seems to go wrong, I intend to explore the factors contributing to such (mis)interpretations, with the goal of achieving a coherent understanding of both what gives rise to various kinds of "semantic illusions", as well as what this can tell us about the way that top-down and bottom-up information is used and integrated during language processing. Ultimately, the intention is to work toward an explicit and comprehensive theory of the processes underlying construction of meaning representations during language comprehension. Here I propose an interdisciplinary research program to attack these questions from a number of angles, taking advantage of a variety of methodologies and disciplines, including linguistics, psychology/neuroscience, and computer science.

Processing

In understanding how meaning is constructed during interpretation of language, a central question is the nature of the moment-by-moment interplay between top-down expectations (generated by context) and bottom-up information (provided by incoming signal) during online processing. Often, studies examining this relationship involve exploiting N400 amplitude or reaction times to investigate a) the extent to which context generates expectations/predictions regarding upcoming input, or b) the speed with which contextual information integrates with bottom up information to enable detection that an incoming word is anomalous (e.g., Federmeier and Kutas, 1999; Otten and Van Berkum, 2007; DeLong et al., 2005; Chow et al., under revision).

These approaches can allow for important inferences about the timing with which these types of information are integrated. However, when it comes to the manner in which these types of information interact, or the relative level of reliance on each type during construction of a final meaning representation, these studies may provide less insight. After all, in most of these cases (if the subjects are paying attention), it seems that any anomalies are ultimately identified, and thus we can only conclude that while it may not have been immediate, the two levels of information were effectively integrated in time to comprehend the sentence.

Given this consideration, it may be that some of the most useful insights in this line of inquiry will come from situations in which the interpretive process goes detectably wrong. This is the type of reasoning behind the investigation of so-called

"linguistic illusions" (e.g., Phillips et al., 2011). Most of the time, for native speakers under normal circumstances, language comprehension is executed smoothly and without detectable error. Sometimes, however, language comprehenders can fail in surprising ways—and the circumstances under which these failures occur can provide important insights with respect to the nature of the relevant mechanisms. Accordingly, the need to account for the occurrence of these illusions necessarily imposes valuable constraints on the way that we formulate our theories of processing.

To this end, a phenomenon that may prove particularly valuable in the investigation of meaning interpretation is what is known as the "Moses Illusion". First identified by Erickson and Mattson (1981), this phenomenon takes its name from the observation that comprehenders very often, upon hearing or reading the question "How many of each kind of animal did Moses take on the ark?" will simply answer "two", failing to notice that it was not Moses but Noah who was involved in the ark story. Barton and Sanford (1993) have observed similar failures with sentences such as "When an airplane crashes, where should you bury the survivors?", with comprehenders often answering with a location for burial rather than pointing out that one should not bury survivors. Unlike phenomena suggesting mere slowness of, or minor interference with, anomaly detection (as indicated by, for instance, lack of a significant N400 effect), in these illusion cases the speakers not only show lack of an increased N400 at the target word (Sanford et al. 2010)—they in fact miss the anomaly altogether. That is, their ultimate interpretation appears to contain material completely inconsistent with the bottom-up input, and thus consistent only, it would seem, with the top-down expectation.

The mere fact that the interpretive systems allow for such an illusion importantly narrows our hypothesis space with respect to the interplay of top-down and bottom-up processes. If language comprehension were a strictly bottom-up compositional process, we would expect that upon encountering "survivors", speakers would identify the word, access its lexical meaning (including, presumably, the fact that it refers to living people), and then integrate it into the meaning of the preceding sentence material. What seems instead to be happening in these cases is that the scenario set up by the preceding context provides a kind of scaffold of expectation, a top-down influence that exerts itself upon the interpretation of the incoming word "survivors"—with the surprising result that that word appears to receive the interpretation of its antonym, "victims". Of course, we cannot go so far as to say that this top-down expectation completely overrides the bottom-up information: intuition strongly suggests that if the word were instead "debris" or "tablecloths" or "clowns", speakers would not be so easily misled into believing that they were being asked about where to bury crash victims. Indeed, studies have confirmed that while "Moses" gives rise to the illusion, "Adam" and "Nixon" are detected easily (van Oostendorp & de Mul, 1990; Erickson & Mattson, 1981). It appears that it is only when the anomalous word has both good fit to the context and significant semantic overlap with the target word that this illusion is generated (c.f., Hannon & Daneman 2001).

If we can identify with a high level of precision the circumstances that cause this illusion to come and go—and the nature of the interpretations resulting from

the illusion—we should be able to draw much more precise inferences about the features of the system that builds these interpretations. Previous studies have explored, to a certain extent, the nature of the circumstances facilitating this and other semantic illusions, but this question has not been pursued systematically. Furthermore, to the best of our knowledge there has been no focused attempt to draw these various isolated phenomena together for a coherent understanding of what gives rise to discrepancies between bottom-up information and ultimate interpretation—and what that implies for our theories of processing and comprehension. This is where I intend to pick up the investigation, working to determine more precisely the conditions that generate this kind of illusion, and what those facts can tell us about the integration of top-down and bottom-up information in building meaning representations. Below I describe a first experiment aimed at beginning to explore these questions, along with some preliminary hypotheses and their predictions.

Looking ahead: the Moses Illusion is, of course, not the endgame of this research program, nor will it be the only way to investigate these interpretive systems. Presumably, what insights we are able to gain from this phenomenon will lead to investigations of other phenomena similarly useful for shedding light on these issues, and for bringing us closer to an explicit and comprehensive theory of language comprehension.

In parallel with this processing research, I plan also to be doing continuing research in semantics and pragmatics. This will allow me to examine in detail certain linguistic phenomena of interest and relevance, and also to improve my knowledge of existing theories of meaning, which can in turn inform my investigation of how meaning is processed. Ideally, insights gained from the processing investigations can also feed back to inform the way that we frame formal theories. One particular point of connection between these domains is the relevance of linguistic focus and "at-issueness" for the occurrence of the Moses Illusion (discussed in more detail in the following section). A strong theoretical foundation will be important for taking into account the influence of these kinds of semantic/pragmatic factors within the interpretive system.

Computation(/application)

What do these questions have to do with the real world? How might these phenomena be linked to applications in society? As part of my external rotation, I plan to explore interpretation and illusion on a different level—the social and political level—using methodologies from the domain of computer science. This will involve collaboration with Philip Resnik, who has worked on computational modeling of phenomena influencing interpretation in political discourse (e.g., framing and "spin").

Just as skilled magicians are able to exploit human visual and attentional processes in order to influence perception, skilled speakers are able to exploit human linguistic and attentional processes in order to influence interpretation. On the language side, we know that certain types of linguistic mechanisms can be used to direct hearers' attention away from certain elements and toward others. We see

evidence of this kind of attentional weighting in studies of the Moses Illusion: Bredart and Modolo (1988) found that when elements susceptible to the illusion are placed in linguistic focus (made to be "at-issue"), detection rates increase, and Kamas et al. (1996) found that priming subjects to think about semantic features distinguishing the anomalous word (e.g., "Moses") from the target word (e.g., "Noah") has the same effect. Establishing explicit computational models of the factors involved in these kinds of phenomena can both inform and be informed by investigations of the neural processes underlying these interpretations, deepening and broadening our understanding of the relevant systems—and allowing this line of inquiry to interact productively with the psycholinguistic aspect of the research program. It has been observed that insights from computer science inspired by questions in other disciplines often fail to feed back to inform the lines of inquiry that inspired them. My hope is to help in "closing that loop", bringing what we are able to learn using computational methods back to bear on questions being entertained on the processing side. Additionally, this work has the potential not only to feed back to my original domains of investigation, but also to feed forward to new domains, opening the door for interesting potential applications of these research questions to real-world problems.

Short-term research plan: psycholinguistic study

One notable point in our "survivors" example—a point which seems to hold in many examples of its kind—is that it is not actually the case that "survivors" is an isolated anomaly in the context. On the contrary, the success of the illusion appears to hinge on "survivors" being in fact a good fit to the context. What generates the observed anomaly is rather the pairing of "survivors" with the verb "bury". However, discussion of these illusions has turned exclusively on the perception of the "survivors" element—unsurprisingly, given that this seems indeed to be the element that is falling prey to the illusion. After all, subjects' responses give clear indication that they are interpreting the question as "where should you bury the victims", and not as "where should the survivors be [taken/sheltered/hidden]" or something of that nature.

Why do we observe this contrast? Is the verb simply a stronger structural element of the sentence, and therefore less susceptible to illusion? Is it rather because "bury" does not have a close enough counterpart with which to be confused in the context? Or could order effects be playing a role—that is, is it the fact that "bury" occurs first, setting up the context against which the incoming word "survivors" will be evaluated? Barton and Sanford (1993) experiment with a relevant order manipulation and conclude that the relative order of the verb and object does not have a significant effect on detection of the illusion. However, this study used an offline reading measure, and subsequent investigation of the phenomenon during online processing (Sanford et al. 2010) has not made use of an order manipulation. Given our interest in the moment-by-moment construction of meaning representations, and the online interplay between top-down and bottom-up information during this process, we would benefit from a clearer picture of how

order affects this illusion, and whether order interacts with some kind of strength contrast between various lexical items.

If we manipulate the relative order of lexical items, through for instance an active/passive manipulation ("where should the survivors be buried" vs "where should you bury the survivors") we can imagine three basic outcomes. First (and intuitively least plausible), if there is not in fact a contrast—rather, all words are equally susceptible to illusion, and order alone is the determining factor—then the illusion should hold in both conditions, but the interpretation should vary based on which element is encountered first. [Note: we would presumably need to control for fact that "bury" does not have an obvious counterpart.] That is, the active sentence should yield the interpretation "bury the victims" and the passive sentence should yield the interpretation "survivors are … [plausible counterpart verb]-ed".

If, on the other hand, there is a contrast, and only "survivors" is susceptible to the illusion, then we have two other plausible outcomes, depending on the precise manner in which information is held and utilized during online processing. On one hand, if the illusion arises because reliance on bottom-up input simply reduces as a sentence progresses and top-down contextual information becomes more robust—then the illusion may be expected to disappear if the illusion-susceptible element ("survivors") occurs earlier in the sentence, when bottom-up information is weighted more heavily. In this case, the anomaly would be detected, and the sentence would be interpreted as nonsense. On the other hand, if we believe (as is suggested by, e.g., Sanford and Sturt, 2002; Ferreira et al., 2002) that language processing routinely involves an element of underspecification, and that perhaps these illusion-susceptible elements are given a quick-and-dirty interpretation even early in the sentence, to await fleshing out upon encountering a stronger element—in this case we might expect the illusion to hold in both conditions, with the interpretation in both cases being that in which the question is about burial of victims.

The idea behind this initial investigation is to give us a preliminary foothold in thinking about how information is held and utilized at different points in a sentence during online processing—thus sharpening our hypotheses with respect to the process of integration of top-down and bottom-up information. Moving forward from there, it will be important to investigate more precisely the nature of the information being accessed and manipulated by the interpretive system. Relevant in this respect will be the question of exactly what we mean by "fit to context" and "semantic overlap" when we describe the circumstances giving rise to the Moses Illusion. On what dimensions does this fit or overlap need to hold? Beyond what thresholds? The more we know about the nature of the information able to trip the system up, the better equipped we will be to determine how exactly the system is making use of this information to construct meaning and arrive at interpretations.

References

Barton, S. B., & Sanford, A. J. (1993). A case study of anomaly detection: Shallow semantic processing and cohesion establishment. *Memory & cognition*, *21*(4), 477-487.

Bredart, S., & Modolo, K. (1988). Moses strikes again: Focalization effect on a semantic illusion. *Acta Psychologica*, *67*(2), 135-144.

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Training Plan

Overview

Effective implementation of the research plan that I have proposed above will require solid training in semantics and pragmatics, cognitive psychology and neuroscience, computational linguistics and modeling, and statistics. I intend to acquire this training through a combination of courses satisfying Linguistics Department and NACS certificate requirements, along with supplementary courses of interest or importance to my research (most notably those that will provide the necessary computational training)—in addition, of course, to the training afforded through my research itself. My graduate research and training will be conducted under the advising of Colin Phillips, Valentine Hacquard, and Alexander Williams as my core advisors, as well as Philip Resnik as the advisor for my interdisciplinary rotation.

Current coursework

By the end of this year I will have completed the Linguistics Department's core requirements, with Semantics, Psycholinguistics, and Syntax core sequences. I will also have completed one interdisciplinary seminar in computational linguistics and neurolinguistics, contributing to one seminar requirement for the Linguistics Department, as well as [pending approval] one of the interdisciplinary seminar requirements for the NACS certificate.

Future coursework

Future coursework will be focused on laying a foundation of training in computational linguistics and computational modeling, and on building on my existing background in neuroscience with coursework toward completion of the NACS certificate. I also plan to take the Pragmatics course offered next semester, and to identify an appropriate statistics course to take in the near future, given that strong statistical abilities will be critical to my being an effective and responsible researcher. The table below indicates the tentative course plan that I have laid out.

Computational rotation

My computational work with Philip Resnik promises in addition to provide extremely valuable experience and training to build upon my coursework in computational linguistics and modeling. A substantial departure from my typical area of work, the computational aspect of my training plan represents the primary intended expansion of my "comfort zone"—though my NACS coursework is sure to meet this description to an extent as well.

Term	Courses (credits)	Dept requirements	NACS requirement
Year 1			
Fall 2013	LING610: Syntax I (3) LING640: Psycholing. I (3) LING660: Semantics I (3)	Core Core Core	
Spring 2014	LING611: Syntax II (3) LING661: Semantics II (3) LING848I: Prediction Sem. (3) LING641: Psycholing II	Core Core 800-level elective Core	Interdisciplinary seminar
Year 2			
Fall 2014	LING663: Pragmatics (3) NACS608: NACS Seminar (1) Comp Ling I (3)	Minor Minor	Core
Spring 2015	LING689: Comp. Psycholing. (3) NACS608: NACS Seminar (1) Comp Ling II (3)	Minor Minor	Core
Year 3			
Fall 2015	LING895: Research Paper (3) NACS641: Intro to Neuro? (4) (800-level Seminar? (3))	PhD Req. PhD Req.	Core
Spring 2016	LING895: Research Paper (3) NACS642: Cog. Neuro (4) (Statistics course?)	PhD Req.	Core
Year 4			
Fall 2016	(Minor area paper due) (Interdisc. sem. NACS) (3)		Interdisciplinary seminar
Spring 2017	LING899: Dissertation (3) (800-level Seminar? (3))	PhD Req. PhD Req.	
Year 5			
Fall 2017	LING899: Dissertation (3) (800-level Seminar? (3))	PhD Req. PhD Req.	
Spring 2018	LING899: Dissertation (3)	PhD Req.	

Interdisciplinary Experience

(Elaboration upon description in Research Plan above)

As discussed in my Research Plan, I plan to satisfy my interdisciplinary experience requirement through a collaboration with Philip Resnik, with whom I have discussed my research interests and determined to explore interpretation and illusion at the social and political level, using methodologies from the domain of computer science.

Philip is interested in computational modeling of phenomena influencing interpretation in political discourse, such as framing and "spin". Just as skilled magicians are able to exploit human visual and attentional processes in order to influence perception, skilled speakers are able to exploit human linguistic and attentional processes in order to influence interpretation. As researchers, we can learn a good deal from the linguistic strategies that can be used to direct hearers' attention away from certain elements and toward others, with the result of altering interpretation. This area of interest can be integrated in productive and interesting ways with my general research program, both feeding back to interact with the processing side, and feeding forward to explore new areas and applications. On the one hand, establishing explicit computational models of the factors influencing susceptibility to this kind of "sleight-of-word" can both inform and be informed by investigations of neural processes giving rise to these interpretations, deepening and broadening our understanding of the complex workings of these phenomena. On the other hand, exploring this angle also opens the door for interesting potential application of these research questions to real-world problems at the social and political level.

The computational training and experience entailed by this collaboration will contribute in very valuable ways to my development as an effective and well-rounded researcher. These kinds of computational skills promise to enhance my abilities in, among other things, developing explicit models of neural processes, conducting complex statistical analyses, and working with linguistic corpora—all of which are highly likely to be relevant to my research at some time or another. It should be noted that although Philip is affiliated with my home department, the work that this collaboration would involve, the academic communities that it would require me to engage with (both in computer science and political science), and the skills that it would require me to develop, are all dramatic departures from my "comfort zone" and typical realm of investigation. This collaboration would also form a significant interdisciplinary connection, bringing my processing and formal linguistic experience to bear on questions that can be addressed with computational methods, as well as questions of interest in social and political science. As for further outcomes, I have every intention of pursuing this work to a concrete completion (in the form of publication and/or real-world application)—and, if it proves productive, of continuing to pursue it long-term.

Broader Impacts

Impacts of research

I am highly committed to selecting my research questions such that the knowledge to be gained has clear potential for eventual application to real-world problems. Language is a central and essential aspect of human cognitive and social functioning, and as I have emphasized above, the interpretation (and expression) of meaning is the basic function of language use. If we can achieve a coherent understanding of the human capacity to interpret meaning, we stand in turn to significantly improve our understanding of the human capacity for language. Previous work has investigated various phenomena—including semantic illusions—relevant to interpretation of meaning, but researchers in this area have not yet made a focused effort to combine insights from these isolated instances for an integrated understanding that can be incorporated explicitly into theories of comprehension. This is what I intend to contribute to this line of investigation.

As for concrete applications: on the cognitive side, improved understanding of how humans extract linguistic meaning has the important potential for application to treatment of aphasia and other language impairments, as well as to child language acquisition and second language acquisition. On the social/political side, improved understanding of the factors exerting influence on language interpretation has potential application not only to the identification and analysis of "sleight-of-word" strategies in social and political discourse—but also to the training of those involved in such discourses. Relatedly, because this research bears on general factors influencing how language is interpreted—or misinterpreted—it is of significant potential relevance for participants in nearly any domain relying heavily on effective and efficient communication.

Contribution to Ling Department and UMD Language Science community

I plan to be actively involved in Language Science Center activities and initiatives, in which I am happy to take organizational and leadership roles. I intend to take a very proactive role in forming interdisciplinary links to bolster and build upon the existing Language Science community (this is an aspect of the program which I consider to be very exciting and of particular intellectual value). I also plan to be an active participant in—ideally contributing to further expanding—the Language Science community's outreach program. To this end, as part of the outreach program I participated earlier this year as a judge for the University Park Elementary School Science Fair.

I am also interested in doing crosslinguistic work (particularly in Chinese), whenever this becomes appropriate within my research program. This is worth noting, given that through such work I can also establish international collaborations of additional value to the department and the Language Science community as a whole.

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April 9th 2014

Dear Language Science Fellows Committee:

This is a letter to confirm my support for Allyson Ettinger's participation in the new Language Science Fellows program. I am, of course, committed to the success of the program, and will do all that I can to help the program to grow. I am also committed to Allyson's success in the program. Allyson's combination of linguistic, psychological, and computational interests are an excellent fit to the goals of our program. The focus of the proposal on using these approaches in the service of understanding the processing of meaning represents the kind of synthesis that we hoped to see when we developed our interdisciplinary program.

Sincerely,

Colin Phillips

Colin Phillips
Professor of Linguistics & Distinguished Scholar-Teacher
Director, Maryland Language Science Center