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Editorial

On Neurons and Other Embarkations

1

> Lull'd in the countless chambers of the brain,
> Our thoughts are link'd by many a hidden chain.
> Awake but one, and lo! what myriads rise!
> Each stamps its image as the other flies.
>
> Samuel Rogers
> *Pleasures of Memory*

Questioners in applied linguistics often ask what and why. Less frequently, questions of when and who arise. This edition of *Issues in Applied Linguistics* is devoted to questions of how and where. How the brain processes, acquires, and uses language have long been inflammatory questions. This flammability seems to hinge more upon the qualities of language than upon whether language is, need be, or ought to be reducible to its mechanistic underpinnings. While the latter methodological issues are indeed controversial, without asking and answering the former questions they seem moot points. It is difficult to know how to answer those who feel language can be significantly studied wholly independent from the brain, since brains seem to be at least minimally essential for its genesis. Once extant, however, why is there a need to study the brain at all? Can't we merely study linguistic processes *per se*, assuming that as we do so we will be illuminating the mind?

The writers published here, I believe, and certainly the editors, are of the opinion that mind *is* brain for most meaningful situations; that is, that the theoretical construct *mind* has little value in the formulation of hypotheses about language and its mechanistic underpinnings. The emphasis throughout this issue is, therefore, on alternatives to current neurobiological, psychological, and philosophical views on language and brain.

Most of the research on brain and language has involved neurolinguistic aphasiology, the study of language abnormalities in

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adults whose language faculties have been disrupted as a result of brain injury of one kind or another. This area of research has a crucial place in history and an assured future. Indeed, most of what is currently known about language in the brain comes from studies of this type. Since neural pathology will be a medical fact of life for some time to come, it seems only reasonable to expect this fruitful type of research to continue. However, there is also a need for a different kind of brain research to begin, a kind which focuses on the mechanisms underlying the processes of acquisition, memorization, and forgetting. To this end, John Schumann and several of his students have established the UCLA Neurobiology of Language Research Group (NLRG).

The technique of this group is not necessarily "empirical," although activity of this type is certainly welcome. Due to an acknowledged need in neuroscience for theoretical development on a comprehensive scale, a generation of "Platonic" scientists whose sole function is to review, assimilate, and apply the work of laboratory scientistsis is being developed. The field is frequently referred to as Theoretical, or Speculative, Neuroscience. The students of the NLRG should be seen within this interdisciplinary light.

Implicit in all that this group discusses within these pages is the awareness that what is being studied is the process of how the brain learns and remembers. To this end, it is frequently necessary to voyage into areas which are ostensibly far afield from traditional linguistics, areas like neurochemistry and neurophysiology.

2

> Clay is moulded to make a vessel, but the utility of the vessel lies in the space where there is nothing. . . . Thus, taking advantage of what is, we recognise the utility of what is not.
>
> Lao Tzu
> *Tao Te Ching*

The research interests of the authors represented in this issue of IAL are various. What they have in common is a belief that study of the brain can not only shed light on current issues in the study of

language, it will create as yet undiscovered areas of inquiry. The aim of neurobiological reductionism is not the mere charting of the mechanisms underlying processes linguists have already posited, but the recognition of the spaces "where there is nothing," spaces we would not otherwise realize. With this goal in mind, there is no way that reductionistic, materialistic study of language and its relationship with the brain can be called "naive."

The first article, by Larry Lem, introduces us to one of the key issues facing the brain-language discipline: the potential which linguistically "non-traditional" areas of the brain have for informing continued research. Starting with an explanation of how much of what is currently known about the relationship between brain and language is the result of the historical predominance of a few critical areas for language comprehension and production, Lem goes on to posit alternative brain areas as important to language. This essay is of critical importance because it not only expands the neurobiological field of inquiry, but also forces the issue of how we must look at the brain as a whole if we want to find a language acquisition device.

Much of what we learn about language is not of the type about which learners can talk. There are some forms of linguistic knowledge which are, clearly, implicit. How different or specific types of linguistic knowledge might be differentially represented, acquired, and stored within the brain is the topic of our second main article. Scarlett Robbins, the assistant editor of this journal, has written a piece in which she demonstrates how procedural knowledge might be housed in the brain.

The third main article, by Edynn Sato and Bob Jacobs, focuses on the brain mechanisms necessary for the processes of selective attention. The necessity of this type of activity for the acquisition of language is obvious. How the brain goes about this activity is a topic which the authors emphasize, clearly showing how neurobiological analysis can be the *a priori* approach to the study of language acquisition mechanisms.

An often overlooked area of the study of language is how we go about forgetting it. Asako Yoshitomi submits a piece showing how the analysis of how-we-forget is just as crucial to our understanding of the representation of language in the brain as the study of how-we-remember. She gives us considerable evidence from psychological and neurobiological studies supporting her model of language attrition.

In our last issue, we published an article by Yasuhiro Shirai on Connectionism, a methodological and conceptual schema through which language transfer could be explained. In our *Exchange* section, Cheryl Fantuzzi criticizes many of the premises of Shirai's arguments and questions cognitive modeling in general.

We are fortunate to have four reviews to offer in this issue. Eduardo Faingold reviews a book called "Why More English Instruction Won't Mean Better Grammar." Charlene Polio comments upon the state of the field of applied linguistics in her review of Larsen-Freeman & Long's *Introduction to Second Language Acquisition.* Jim Purpura, the advertising manager of *IAL*, reviews Ellen Bialystok's book, *Communication Strategies: A Psychological Analysis of Second-Language Use*, which posits a new psychological framework to account for language learners' production strategies. And Howard Williams critiques the second volume of Talmy Givon's recent work on morphology and syntax.

3

> In creating, the only hard thing's to begin;
> A grass-blade's no easier to make than an oak.
>
> James Russell Lowell
> *A Fable for Critics*

> Il n'y a que le premier pas qui coute.
> [It is only the first step which takes the effort.]
> (This quote refers to the legend of Saint Denis who walked away from his own execution carrying his head)
>
> Madame Marie Vichy-Deffand
> *Lettre à d'Alembert*

A little over a year ago, I began working on this journal in the capacity of production assistant. It was the type of beginning which, at the time, seemed reasonably sound and safe: a little work, learn the ropes, and, with luck and years of dedication, be allowed a position among the senior editors. Little did I know. This publication is, I need not remind the reader, a production of graduate students. As students' lives progress, they frequently feel the need

for certain changes as a result of minor hurdles inherent in the path to academic advancement. As a result, within my first year at IAL I moved (rather quickly) through the position of managing editor to the position I now have the very real honor of holding. I thank the former editor, Sally Jacoby, and the former managing editor, Patrick Gonzales, for their support and mentorship. I also thank those who judged me capable of assuming this position, including Marianne Celce-Murcia and John Schumann, whose continued support will never be forgotten.

This third issue with which I am involved happens, quite coincidentally I assure you, to be one which is quite close to my heart. As a member of the NLRG, I have been intimately acquainted with the development of this particular issue. The idea of a second guest-edited issue occurred as a result of our first guest-edited issue of one year ago. The response to that issue was (and continues to be) so enthusiastic that we have decided to continue the practice of thematically focused issues. John Schumann mentioned to Sally Jacoby that there was a body of papers written for his courses that might make an interesting journal issue. One year later, here we are.

Also, this issue of IAL is the first in which none of the current editorial staff or their assistants can say they were around when the idea of founding a journal focusing on the important arguments in our field was conceived. We new folk hope that in the ensuing years we may continue to foster the idea, to continue to uphold the commitment to excellence of the material which goes between these covers, and to institutionalize *Issues in Applied Linguistics* as one of the most eminent journals in the field. To this latter end, I am pleased to announce a European distributor for the journal, subscriptions on six continents, and the assemblage of a new, enthusiastic editorial board with a great many talented people interested in assisting. The future of this journal looks very bright indeed.

I would like to thank the readers of the articles for this issue who gave of their time and expertise to help make these papers accurate and interesting. I would also like to thank all those who helped to make this issue a reality, including the other members of the editorial committee and the production assistants. Most of all I would like to thank the guest editor, John Schumann, without whose helpful guidance and stalwart vision this thematic issue would not be.

December, 1992 Joseph R. Plummer

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