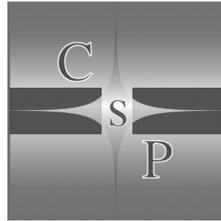


The Future of Post-Human Language

The Future of Post-Human Language
A Preface to a New Theory
of Structure, Context, and Learning

By
Peter Baofu



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To Those in the World Beyond Language

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FOREWORD

For readers who can envision themselves on a magic carpet overlooking terrain that is called theoretical frameworks, the current stop is called Language and Learning.

Dr. Peter Baofu, who has wide-ranging visions and endless curiosity, serves as a tour guide, inviting readers to critically examine language as the conventional cornerstone of thinking, feeling and doing in structuring the human condition. He first parses the writings of others in a thoroughgoing way, focusing attention on what has already been said about language and learning, and presents yet another dimension to the subject.

This exposition is a delight for both educators and thinkers on language and indeed, for anyone who deals with language as a tool for human advancement. May its magic spur others to continue with further exploration.

Sylvan Von Burg
School of Business
George Washington University

ACKNOWLEDGMENTS

As is true with all previous books of mine, this one is written to challenge contemporary wisdom, this time, on structure and context in relation to language and learning—and, in the process, to offer a new theory to understand the subject matter better.

This political incorrectness requires that this book receives no external funding nor help from any formal organization or institution.

My only joy is that wonderful feeling, in a kind of “eureka” moment, to discover something new not imagined before.

Lest I forgot, I greatly appreciate the foreword by Sylvan von Burg at George Washington University School of Business.

In any event, and as always, I bear the sole responsibility for the ideas presented in this book.

ABBREVIATIONS

- ALD = Peter Baofu. 2007. *The Rise of Authoritarian Liberal Democracy: A Preface to a New Theory of Comparative Political Systems*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- BCIV = Peter Baofu. 2006. *Beyond Civilization to Post-Civilization: Conceiving a Better Model of Life Settlement to Supersede Civilization*. NY: Peter Lang Publishing, Inc.
- BCPC = Peter Baofu. 2005. *Beyond Capitalism to Post-Capitalism: Conceiving a Better Model of Wealth Acquisition to Supersede Capitalism*. NY: The Edwin Mellen Press.
- BDPD1 = Peter Baofu. 2004. Volume 1. *Beyond Democracy to Post-Democracy: Conceiving a Better Model of Governance to Supersede Democracy*. NY: The Edwin Mellen Press.
- BDPD2 = Peter Baofu. 2004. Volume 2. *Beyond Democracy to Post-Democracy: Conceiving a Better Model of Governance to Supersede Democracy*. NY: The Edwin Mellen Press.
- BNN = Peter Baofu. 2006. *Beyond Nature and Nurture: Conceiving a Better Way to Understand Genes and Memes*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- BWT = Peter Baofu. 2007. *Beyond the World of Titans, and the Renaking of World Order: A Preface to a New Logic of Empire-Building*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FAE = Peter Baofu. 2007. *The Future of Aesthetic Experience: Conceiving a Better Way to Understand Beauty, Ugliness and the Rest*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FC = Peter Baofu. 2007. *The Future of Complexity: Conceiving a Better Way to Understand Order and Chaos*. London, United Kingdom: World Scientific Publishing Co.
- FCD = Peter Baofu. 2002. *The Future of Capitalism and Democracy*. MD: The University Press of America.
- FHC1 = Peter Baofu. 2000. Volume 1. *The Future of Human Civilization*. NY: The Edwin Mellen Press.

- FHC2 = Peter Baofu. 2000. Volume 2. *The Future of Human Civilization*. NY: The Edwin Mellen Press.
- FIA = Peter Baofu. 2008. *The Future of Information Architecture: Conceiving a Better Way to Understand Taxonomy, Network, and Intelligence*. Oxford, England: Chandos Publishing (Oxford) Limited.
- FPHC = Peter Baofu. 2004. *The Future of Post-Human Consciousness*. NY: The Edwin Mellen Press.
- FPHCT = Peter Baofu. 2009. *The Future of Post-Human Creative Thinking: A Preface to a New Theory of Invention and Innovation*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHE = Peter Baofu. 2009. *The Future of Post-Human Engineering: A Preface to a New Theory of Technology*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHG = Peter Baofu. 2009. *The Future of Post-Human Geometry: A Preface to a New Theory of Infinity, Symmetry, and Dimensionality*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHK = Peter Baofu. 2008. *The Future of Post-Human Knowledge: A Preface to a New Theory of Methodology and Ontology*. Oxford, England: Chandos Publishing (Oxford) Limited.
- FPHL = Peter Baofu. 2009. *The Future of Post-Human Language: A Preface to a New Theory of Structure, Context, and Learning*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHML = Peter Baofu. 2008. *The Future of Post-Human Mathematical Logic: A Preface to a New Theory of Rationality*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHMM = Peter Baofu. 2009. *The Future of Post-Human Mass Media: A Preface to a New Theory of Technology*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHST = Peter Baofu. 2006. *The Future of Post-Human Space-Time: Conceiving a Better Way to Understand Space and Time*. New York: Peter Lang Publishing, Inc.
- FPHU = Peter Baofu. 2008. *The Future of Post-Human Unconsciousness: A Preface to a New Theory of Anomalous Experience*. Cambridge, England: Cambridge Scholars Publishing, Ltd.
- FPHUP = Peter Baofu. 2009. *The Future of Post-Human Urban Planning: A Preface to a New Theory of Density, Void, and Sustainability*. Cambridge, England: Cambridge Scholars Publishing, Ltd.

• PART ONE •

Introduction

CHAPTER 1
*INTRODUCTION—THE INFLUENCE
OF LANGUAGE*

The limits of my language mean
the limits of my world.
—Ludwig Wittgenstein (J. Carey
2007)

The Myth of the Prison House of Language

To what extent is there really a universal structure, whether innate or not, of language for learning? Or conversely, is language learning mainly context-based? And, in the end, does the very nature of language delimit our mental world—such that “the limits of my language mean the limits of my world” or, in a different parlance, constitute “the prison house of language”?

Contrary to the conventional wisdom held by many in history, all these seemingly plausible views are highly misleading, to the extent that something vital is missing in the conventional debate, such that the nature of learning has yet to be more comprehensively and systematically understood.

This is not to say, however, that the literature in the study of language (and other related fields) hitherto existing in history has been much ado about nothing. In fact, much can be learned from different theoretical approaches in the literature.

The virtue of this book is to provide an alternative (better) way to understand the nature of learning, especially (though not exclusively) in relation to language—which, while incorporating the different views in the literature, transcends them all in the end, with the use of language and also beyond it.

This inquiry may sound academic, but it has enormous implications not just for the narrow concern with the nature of language, but also, more

importantly, for the larger concern with the nature of thinking, feeling, and doing in learning, both with the use of language and beyond it.

If true, this seminal work will fundamentally change the way that we think, not only about the nature of language, in a small sense— but also about the nature of learning, with the use of language and also beyond it, from the combined perspectives of the mind, nature, society, and culture, for the human future and what I originally called its “post-human” fate, in a broad sense.

Language and Linguistics

A good way to start the inquiry on the nature of language (and learning, for that matter) is to define at the outset the term “language,” which, in a formal definition, refers to “a systematic means of communicating ideas or feelings by the use of conventionalized signs, sounds, gestures, or marks having understood meanings.” (MWD 2009)

There are of course many different languages or “systematic means of communicating ideas or feelings” in the course of evolution on this planet Earth. But they can all be classified in four main categories, namely, (a) “human languages” (e.g., Chinese, English, etc.), (b) “animal languages” (e.g., bee dances, bird songs, etc.), (c) “artificial languages” (e.g., Esperanto, Ido, etc.), and “formal languages” (e.g., C++, Pascal, etc.). (WK 2009, 2009a, & 2009b)

Yet, this is not to suggest that the distinction between one language and another can be easily and clearly defined. On the contrary, “[m]aking a principled distinction between one language and another is usually impossible. For instance, there are a few dialects of German similar to some dialects of Dutch...Some like to make parallels with biology, where it is not possible to make a well-defined distinction between one species and the next.” (NEB 2005; WK 2009)

With this caveat in mind—the study of language, especially in relation to “human languages,” falls under the discipline of “linguistics,” which can be divided into three main groups, namely, (i) “theoretical linguistics,” (ii) “descriptive linguistics,” and (iii) “applied linguistics,” as summarized hereafter, in that order (and also in *Table 1.1*). (WK 2007)

Theoretical Linguistics

“Theoretical linguistics,” as the words suggest, is more concerned with the theoretical (abstract) study of language, especially, though not

exclusively, in relation to three major sub-fields, namely, (a) “grammar,” (b) “semantics,” and (c) “pragmatics.” (WK 2007)

There are of course other sub-fields too, like “lexis” and “systematic functional linguistics,” but these two overlap with the main three sub-fields and will be summarized later in a different context.

(a) With this qualification in mind—“grammar” refers to the study of “structure” in language and can further be sub-divided into (a1) “morphology” (viz., “the formation and composition of words”), (a2) “syntax” (viz., “the rules that determine how words combine into phrases and sentences”), and (a3) “phonology” (viz., “the study of sound systems and abstract sound units”). (WK 2007)

(b) “Semantics,” on the other hand, means the study of “meaning” in language, or more specifically, “the study of interpretation of signs or symbols as used by agents or communities within particular circumstances and contexts. Within this view, sounds, facial expressions, body language, and proxemics have semantic (meaningful) content, and each has several branches of study. In written language, such things as paragraph structure and punctuation have semantic content...” (WK 2007 & 2009c; IEUS 1955)

Thus, “semantics has many subfields, including proxemics, lexicology, syntax pragmatics, etymology and others....In philosophy of language, semantics and reference are related fields. Further related fields include philology, communication and semiotics.” (WK 2009c)

(c) And “pragmatics” focuses on the study of “speech acts,” especially on “how communication is achieved in a given instance of language use; it studies how the transmission of meaning depends not only on the linguistic knowledge (e.g. grammar, lexicon etc.) of the speaker and listener, but also on the context of the utterance, knowledge about the status of those involved, the inferred intent of the speaker, and so on” (WK 2009d; S. Liu 2009)

In this way, one should not confuse “semantics” with “pragmatics.” The reason is that, although both are concerned with the study of meaning, pragmatics differs from semantics, in that the former examines “how the meaning of a sentence (or other linguistic unit) changes depending on how and where it is expressed, or on the *structural ambiguity* in language.... Another perspective is that pragmatics deals with the way in which we reach our goals in communication.” (WK 2009d)

Descriptive Linguistics

“Descriptive linguistics,” unlike “theoretical linguistics,” focuses more on the descriptive (concrete) study of language, or “the work of analyzing and describing how language is spoken (or how it was spoken in the past) by a group of people in a speech community....[And] like all other sciences, its aim is to observe the linguistic world as it is, without the bias of preconceived ideas about how it ought to be.” (WK 2009e)

It can further be divided in four main sub-fields, namely, (a) “phonetics,” (b) “historical linguistics,” (c) “sociolinguistics,” and (d) “corpus linguistics.” (WK 2009e)

(a) “Phonetics” in descriptive linguistics should not be confused with “phonology” in theoretical linguistics. Although both concerns with the study of sounds in language, phonetics is more concerned with the descriptive nature of speech sounds, especially in relation to “the physical properties of speech sounds (phones), and the processes of their physiological production, auditory reception, and neurophysiological perception.” (WK 2009f)

More precisely, phonetics studies three main physical properties of speech sounds, namely, (a1) “the articulation of speech” (like “the position, shape, and movement of articulators or speech organs, such as the lips, tongue, and vocal folds”) in “articulatory phonetics,” (a2) “the acoustics of speech” (like “the properties of the sound waves, such as their frequency and harmonics”) in “acoustic phonetics,” and (a3) the “perception” of “speech” or “speech perception” (like “how sound is received by the inner ear and perceived by the brain”) in “auditory phonetics.” (WK 2009f)

(b) “Historical linguistics” (also known as “diachronic linguistics”) studies “language change” over time. (WK 2009g)

For example, it aims (b1) “to describe and account for observed changes in particular languages,” (b2) “to reconstruct the pre-history of languages and determine their relatedness, grouping them into language families (comparative linguistics),” (b3) “to describe the history of speech communities,” and (b4) “to study the history of words” (i.e. “etymology”). (WK 2009g)

(c) “Sociolinguistics” in descriptive linguistics should not be confused with “pragmatics” in theoretical linguistics. Although both are concerned with “speech acts” and thus overlap with each other to a great extent, sociolinguistics is more concerned with “the effect of any and all aspects of society, including cultural norms, expectations, and context, on the way language is used.” (WK 2009h)

For illustration, sociolinguists study such “social variables” (like “ethnicity, religion, status, gender, level of education, age, etc.”) and learn “how creation and adherence to these rules is used to categorize individuals in social class or socio-economic classes. As the usage of a language varies from place to place (dialect), language usage varies among social classes, and it is these sociolects that sociolinguistics studies.” (WK 2009h)

(d) And “corpus linguistics” refers to “the study of language as expressed in samples (corpora) or 'real world' text.” (WK 2009i)

This method for the study of “real language” (in the real world as it naturally occurs) in descriptive linguistics contrasts sharply with the theoretical study of grammar in theoretical linguistics, since corpus linguistics “represents a digestive approach to deriving a set of...rules by which a natural language is governed.” (WK 2009i)

Therefore, corpus linguistics rejects the “careful analysis of small speech samples obtained in a highly controlled laboratory setting” as in theoretical linguistics as inadequate. (WK 2009i)

The reason is that “the problem of laboratory-selected sentences is similar to that facing lab-based psychology: researchers do not have any measure of the ethnographic representativity of their data.” (WK 2009i)

Applied Linguistics

“Applied linguistics” makes good use of the findings in “theoretical linguistics” and “descriptive linguistics” for practical applications, especially when it tries to “offer solutions to language-related real-life problems” in “education, linguistics, psychology, anthropology, and sociology,” just to cite a few obvious candidates. (WK 2009j)

Thus, applied linguistics is a highly “interdisciplinary” field of study for solving “language-related real-life problems,” which can come in all shapes and sizes, such as “bilingualism and multilingualism, computer-mediated communication (CMC), conversation analysis, contrastive linguistics, language assessment, literacies, discourse analysis, language pedagogy, second language acquisition, lexicography, language planning and policies,...forensic linguistics, and translation,” for example. (WK 2009j)

Language and Learning

With this introduction of the different sub-fields in linguistics in mind—the study of language is related to the study of learning in two

fundamental ways, namely, on how and why the “structure” and “context” in language acquisition can affect the nature of learning.

To start, the word “learning” is defined as “acquiring new knowledge, behaviors, skills, values, preferences or understanding”—and can occur (a) in different ways and (b) in different domains, as summarized below, respectively (and also in *Table 1.2* and *Table 1.3*). (WK 2009k)

Different Ways of learning

For illustration, here are five major ways of learning, namely, (a) “non-associative” learning,” (b) “associative learning,” (c) “play,” (d) “imitation,” and (e) “rote learning.” Surely, there can be more than five ways of learning, but these five are sufficient for the illustrative purpose at hand.

(a) In “non-associative learning,” there are two main types for illustration.

The first type is “habituation” (viz., “a progressive diminution of behavioral response probability with repetition of a stimulus”); for example, “an animal first responds to a stimulus, but if it is neither rewarding nor harmful the animal reduces subsequent responses” to the stimulus. (WK 2009k)

And the second type is “sensitization” (viz., “the progressive amplification of a response follows repeated administrations of a stimulus”); for instance, a “repeated tonic stimulation of peripheral nerves...will occur if a person rubs his arm continuously. After a while, this stimulation will create a warm sensation that will eventually turn painful.” (WK 2009k) So, the person learns to stop rubbing his arm at that point.

(b) In “associative learning,” there are also two main types for illustration.

The first type is called “operant conditioning,” which “is the use of consequences to modify the occurrence and form of behavior.” (WK 2009k) The basic tools are either positive (i.e., which is “delivered following a response” as in “reinforcement”) or negative (i.e., which is “withdrawn following a response” as in “punishment”). (WK 2009m)

And the second type is known as “classical conditioning” (also called “Pavlovian” or “respondent conditioning”), which “involves repeatedly pairing an unconditioned stimulus” (e.g., the presence of meat to a dog) “with another previously neutral stimulus” (e.g., the sound of a metronome used by a lab technician). (WK 2009k & 2009l) In his experiment, Ivan Pavlov discovered “that, rather than simply salivating in the presence of