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**LANGUAGE ACQUISITION- FROM LANGUAGE INSTANCES TO RELATIONS  
OF IDEAS**

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**ABSTRACT:** *This paper addresses the issue of how people derive relational/grammatical knowledge of language from experience of language instances. The argument of the paper is framed through discussion of Hume's theory of human understanding. Hume classified human knowledge into two kinds: relations of ideas and matters of fact, and the knowledge of language is also viewed from this theoretical perspective. Chomsky's theory of linguistic competence is nothing but the knowledge of the relations of ideas intended to express in the process of communication through conventional language forms. The relations of ideas are verbalized and conventionalized in a particular language as the grammar or language structures. The native speaker's knowledge of these relations of ideas derives from his experience of instances of language in use. The mechanisms of the mental operation of transformation from knowledge of language instances to knowledge of grammatical conventions reflecting the relations of ideas in communication are cause and effect, and similarity.*

**KEYWORDS:** Language Acquisition, Language Instance, Relations Of Ideas, Hume, Cause And Effect, Similarity

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## **INTRODUCTION**

Language acquisition refers to the process by which human beings, especially children, acquire the ability to perceive and comprehend language used by people of the language community, as well as produce and use the learned language to communicate with them. Language processing is considered as one of the quintessential traits of human species, and the neurobiological basis of language processing has been identified to support particular language functions (Friederici, 2011). Nonhumans do not communicate in language, and no

matter what efforts humans have made to teach them human language, they have never demonstrated or developed the capacity of learning and speaking any human language. The increase of knowledge of the neurobiological basis of language only proves the existence of the biological foundations of language predicted by Lenneburg (1967).

The identification of the biological and neurobiological basis of language acquisition only confirms what Chomsky (1964) claimed --- the innate language acquisition device (LAD). Knowledge of the locus of language in the brain and the LAD has not revealed to us anything about the mechanisms of language processing in the mind. Just as soil supports the growth of plants, the biological and neurobiological basis serves as the fertile soil for the growth of the plants of language. The identification of a particular piece of soil for the growth of a particular plant only increases our knowledge of the locus of the particular plant, not our knowledge of how the plant grows. Likewise, the identification of the areas where language functions does not lead us to understand the mechanisms of the development of the language. In order to understand the mechanisms of children's acquisition and development of language, we have to resort to children's acquisition and development of other areas of knowledge and their experience as a whole. According to Halliday (1999/2008:31), "language evolved, in the human species, in two complementary functions: construing experience, and enacting social process." He claims that our experience is the "ideation base", and language serves to construe this ideation base. He stresses that "the categories and relations of our experience are not 'given' to us by nature, to be reflected in our language, but are actively construed by language, with the lexicogrammar as the driving force." Tomasello (2003:1-2) also agreed that the human species is "biologically prepared" for the prodigious task in ways that individuals of other species are not, "but this preparation cannot be too specific, as human children must be flexible enough to learn not only all of the different words and conventional expressions of any language but also all the different types of abstract constructional patterns that these languages have grammaticized historically."

Tomasello (2003:2-4) hypothesized two fundamental sets of skills, the set of attention-reading skills and the set of pattern-finding skills, to challenge Chomsky's theory of universal grammar, or LAD. These two sets of skills are necessary for children to acquire the appropriate use of any and all linguistic symbols, including complex linguistic expressions and constructions. The first set of skills enables children to manipulate the intentional or mental states of other persons, which means that children acquire their language through social and communicative interaction with adults and their learning process depends on their

interactive process in communication with adults. The second set of skills refers to the skills of categorization, which enables children to find patterns in the language they hear in their interaction with other people.

Like Chomsky, Tomasello did not elaborate on the evolutionary reasons for these unique human skills. His hypotheses imply that children demonstrate skills of categorization in all kinds of experience, and language acquisition is only one area of experience. The purpose of this paper is to address the issue of the nature of human experience, and by introducing Hume's (2007) theory of human understanding to explore the bigger picture of the skills of categorization and pattern-finding demonstrated in all areas of experience.

### **Two Kinds of Human Reasoning**

Hume (2007: 26-27) argued that there are two kinds of human reasoning or enquiry: relations of ideas and matters of fact. The first kind includes the sciences of geometry, algebra, and arithmetic. It is the affirmation that is either intuitively or demonstratively certain. For instance, the square of the hypotenuse is equal to the square of the two sides. This proposition expresses a relation between these figures. That three times five is equal to the half of thirty expresses a relation between these numbers. These propositions are independent of actual things or events existent in the universe. Three plus three equals six, which means three of anything plus three of anything of the same kind or some other kind result in six. The truths of the equations retain certainty and evidence without any support from any particular instance of experience. On the contrary, matters of fact are the second object of human reason. They are not ascertained in the same manner, and their truth does not retain evidence. The contrary of every matter of fact is still possible, because it can never imply a contradiction. Matters of fact are conformable to reality. Hume illustrated his point with the example of the sun, which will rise tomorrow. This is a clear and simple proposition. But that the sun will not rise tomorrow is also an intelligible proposition. It implies no more contradiction than the affirmation that the sun will rise. If we attempt to demonstrate its falsehood, our effort will be in vain.

Hume (2007:29) further enquired the nature of that evidence which assures us of any real existence and matter of fact, beyond the present testimony of our senses, or the records of our memory. Our reasoning is founded on our implicit faith and security in the relation of *cause* and *effect*. That relation alone enables us to go beyond the evidence of our memory and senses. Our belief in any matter of fact derives from another fact. For instance, if you are

asked why you believe your friend is in France, you might say that you have received a letter from him, which is another fact. Hume then claimed that all our reasonings concerning fact are of the same nature. There is a connection between the present fact and that which is inferred from it. The reason why humans make inferences of this kind is that these are the effects of the human make and fabric. The reasonings are founded on the relation of cause and effect, which is either near or remote, direct or collateral. For instance, heat and light are collateral effects of fire, and the one effect may justly be inferred from the other.

This is the nature of that evidence, which assures us of matters of fact. Then how do humans arrive at the knowledge of cause and effect? Hume (2007:30) made a general proposition that the knowledge of this relation is not, in any instance, attained by reasonings a priori, but arises entirely from experience. Particular objects are constantly conjoined with each other. If we experience an object that is entirely new to us, we will not be able to discover any of its causes or effects. All our reasonings are assisted by our experience in order to draw any inference concerning real existence and matter of fact.

### **Two Kinds of Knowledge of Language**

We can also find two kinds of reasoning with regard to the knowledge of language: grammatical relations (Hume's relations of ideas) and usage conventions of language (Hume's matters of fact). Song and Liu (1984) once argued that the so-called different systems of language actually refer to different distributions and expressions of relational concepts in different languages. Generally speaking, relational concepts can be expressed in two ways: word change and word combination. Word combination indicates the relations of subject and predicate, verb and object, and modifier and noun or verb, and complementary and compound relations.

Language is often referred to as a tool for communication, and this implies that it serves as a tool of expression of the speaker's communicative ideas. If the ideas are matters of facts in the mind of the speaker, then these ideas are concrete instances of experience. Dai (2004, 2013) discussed how communicative ideas are transformed into linguistic expressions in the process of language development as well as the speaker's language production, by providing an example of a black dog running after a hare. Both humans and other animals can experience this matter of fact. The experience of the instance does not require language of any kind. According to Engels (1876), in the due cause of evolution of mankind, on a certain occasion of social communication, the men in the making through social labor were impelled to communicate a somewhat similar idea of a black dog running after a hare. It was then and

only then that they had something to say to each other. This communicative notion is the prerequisite for the creation and development of human language. Human experience is the source of his conception of the “black”, “dog”, “running after” and “hare”. The concepts of “black”, “dog”, “running after” and “hare” represent the elements of the communicative ideas and are realized by phonological forms.

No matter how a language socially or collectively conventionalizes the structures and relations of the communicative ideas, it should be capable of expressing the communicative ideas. Hence Dai (2004) concluded that the structures of the natural or social world through the perception and conception of humans, those of the communicative ideas that are developed through experiencing the natural or social world, and those of language expressions are identical and should be viewed and approached in this logical and sequential order.

Chomsky's theory of transformational and generative grammar is nothing but the relations of the communicative ideas linguistically realized in a particular language --- English. “Universal Grammar” is actually the relations of communicative ideas, derived from the matters of fact in the experience. It is the “grammar” of the perceived world, the “grammar” of the lived experience and the “grammar” of the communicative notions, whether it be called “grammar” or “structure” or “logic” or “relation”. A sentence can be divided into a noun phrase and a verb phrase not because language is naturally and logically so, but because humans perceive the world in this way, and language is conventionalized accordingly.

The subject, predicate, object, attributive, adverbial and complement of a sentence are terms invented by linguists or grammarians to describe the functions of the parts of a sentence. This traditional discussion of the language phenomenon is quite superficial. At point of the very origin of any language, there only existed relations of the ideas of the matters of fact. These relations are universal and the creation of language as a tool to communicate these ideas reflects these relations. The Dasein's experience of the black dog running after the hare is the locus of the origin of language, and hence reveals the nature of language (Hedegger, 1996).

### **Similarity: The Foundation of the Operation of Experience**

The foundation of all our reasonings and conclusions concerning the relation of cause and effect is our experience. Hume (2007: 34-35) argued that even after we have experience of the operations of cause and effect, our conclusions from that experience are not founded on reasoning or any process of the understanding. When we see similar sensible qualities of

objects or events, which have like secret powers or principles, we expect effects, similar to those which we have experienced, will occur. There is no known connection between the sensible qualities and the secret powers of the object or events that we have experienced, and therefore our mind cannot be led to form a conclusion concerning their constant and regular conjunction. Past experience can only give direct and certain information of the experienced objects. But why should this experience be extended to future times, and to other objects, similar only in appearance?

It does not seem necessary that similar objects or events with like sensible qualities must have the similar secret powers or principles at another time. If one object has always been attended with a certain effect, then we naturally foresee that other similar objects will also be attended with similar effects. These two propositions are far from being the same. The latter proposition is inferred from the former. The connection between these propositions is not intuitive. We need a medium which may enable the mind to draw such an inference.

Hume (2007: 37) further explored the mechanism of the operation of experience. In reality, all arguments from experience are founded on the similarity which we discover among natural objects, and by which we are induced to expect effects similar to those which we have found to follow from such objects. None but a fool or madman will ever pretend to dispute the authority of experience, or to reject that great guide of human life. This is the principle of human nature, which gives this mighty authority to experience, and makes us draw advantage from that similarity which nature has placed among different objects. From causes which appear similar we expect similar effects. This is the sum of all our experimental conclusions. It is only after a long course of uniform experiments in any kind, that we attain a firm reliance and security with regard to a particular event. We infer from a number of uniform experiments a connection between the sensible qualities and the secret powers. Similar sensible qualities will always be conjoined with similar secret powers.

### **Similarity: The Foundation of the Operation of Language Acquisition**

Our language acquisition and learning is also founded on similarity. Similarity between the relations of communicative ideas or that between different language contexts is what we tend to resort to when we infer from our past experience or when we are faced with a new instance of language in use. We construct our language knowledge by experiencing matters of fact of language in use and arrive at inferences of grammatical and contextual relations of language usage.

Chomsky's (1965) concept of linguistic competence refers to the system of linguistic knowledge possessed by native speakers of a language. Linguistic performance refers to the way a native speaker actually uses the language system. Linguistic competence is the knowledge of ideal native speakers' language system that enables them to produce and interpret an infinite number of sentences in their language, and to distinguish grammatical sentences from ungrammatical ones. This knowledge of the native speakers' language system is characterized by being intuitive, creative and productive. Native speakers are able to intuitively judge whether a sentence is grammatically correct or not, and they can creatively produce an infinite number of grammatically correct sentences, including novel ones, with a limited set of grammatical rules.

The speaker's knowledge of a finite number of grammatical rules in Chomsky's argument is actually the speaker's knowledge of the rules of the relations of communicative ideas, which he has attained from the linguistic instances that he has experienced in the process of language communication. The actual precise instances of language in actual use are infinite, but similar relations are finite. A child endowed with the capability of the operational mechanism of experience is naturally able to infer grammatical relations of language usage from actual language instances in use.

For instance, from frequent experience of "this is the boy I beat", "this is the pen he used", "that is the bus he took", "this is the house my father bought" and so on and so forth, a child in an English community will certainly infer the relation of "this/that is the □ somebody ※" (Dai, 2004). With this knowledge of the relations of the ideas contained in the language structure of the instances, the child will be able to produce an infinite number of instances of language in different situations. Chomsky (1957: 15) became well-known by his grammatically correct but meaningless sentence "Colorless green ideas sleep furiously." He claimed that grammatical sentences cannot be identified with meaningful or significant sentences in any semantic sense. The sentence "Colorless green ideas sleep furiously" and the sentence "Furiously sleep ideas green colorless" are equally nonsensical, but any speaker of English will recognize that only the former is grammatical. He then concluded that any search for a semantically based definition of "grammaticalness" will be futile. Presented with these sentences, a speaker of English will read the former sentence with a normal sentence intonation, but he will read the latter one with a falling intonation on each word, in fact, with just the intonation pattern given to any sequence of unrelated words. Chomsky attributed this

linguistic behavior to the speaker's innate intuition, rather than to the nature of his frequent experience of instances of language in use. If we remove the semantic elements, which indicate the relation or structure of the arrangement of the parts of a sentence, from the words, then every native speaker will read the former sentence with the same intonation as the latter. "Color green idealess sleepily furious." Or "Cloroless grene eadis slepe fruiyouslu." This is the semantically based definition of grammaticalness. The abstract and generalized relation "adv + adj + n + v +adv" is a possible structure in English, and by experiencing instances of this kind, any normal native speaker, after sufficient exposure to language instances in use, is able to develop the knowledge of that relation or grammatical structure.

From Hume's (2007) theory of human inference from experience, it is quite evident that the native speaker's knowledge of the grammatical relations or structures is attained from his repeated experience of language instances in use. Speakers can infer relations not only at the sentence level, but also at the contextual level. For instance, when a child is given a sweet, he is taught to say "thank you", and next time when he is given something else to eat, he is supposed to learn to say "thank you". He is in a position to transfer the use of language in one particular situation (learning to say "thank you" from being given a sweet by a certain person in a certain situation) to the use of language in another new situation (using "thank you" when the child is given something else to eat in a new situation). The child is endowed with the competence to generalize relations from matters of fact and to transfer relations to other new matters of fact. Both the knowledge of relations and that of matters of fact are attained from experience.

## **CONCLUSION**

Even though Hume lived more than two hundred years ago, his argument against theories of innate ideas is still outstanding in the literature review. Linguists or even psychologists usually confine themselves to the direct problems they intend to address and rarely go beyond the scope of discipline to view the issue from a philosophical point of view. The behavioral tradition of psychology restricted itself to the external behavior of animals and humans in order to understand the internal psychological or mental operations. Likewise, the cognitive tradition of psychology since the 1950s has been limited to the cognitive schema or structures or relations or connections. Language acquisition or learning is one of the most important areas (if not the most important) of human experience. Human language serves human communication, and therefore the study of language cannot be detached from the study of



human communication. Accordingly, the study of grammar or language structures should be based on the study of the relational ideas in the communicative intention in the process of human interaction.

## References

- Chomsky, N. (1965) *Aspects of the Theory of Syntax*, MIT Press, Boston, Mass.
- Chomsky, N. (1957) *Syntactic Structures*, Mouton & Co. N.V. Publishers, The Hague.
- Dai, Z. (2004) *The Formation and Development of Verbal Communicative Competence in a Foreign Language: A Perspective of the Personal Experience Theory* (Doctoral Dissertation), Beijing Normal University, Beijing.
- Dai, Z. (2013) *Grammar: from experience to language*, *Theory and Practice in Language Studies*, (6): 1045-1049, doi:10.4304/tpls.3.6.1045-1049.
- Engels, F. (1876) *The part played by labour in the transition from ape to man*, <http://www.marxists.org/archive/marx/works/1876/part-played-labour/index.htm>
- Friederici, A. D. (2011) *The brain basis of language processing: from structure to function*, *Physiological Reviews*, 91: 1357–1392, doi:10.1152/physrev.00006.2011.
- Halliday, M. A. K. (1999/2008) *Construing Experience through Meaning: A Language-based Approach to Cognition*, Continuum International Publishing Group, Beijing.
- Heidegger, M. (1996) *Being and Time*, translated by Joan Stambaugh, State University of New York Press, Albany, YN.
- Hume, D. (2007) *An Enquiry Concerning Human Understanding and Other Writings*, edited by Stephen Buckle Cambridge University Press, Cambridge.
- Lenneberg, E. H. (1967) *Biological Foundations of Language*, John Willey and Sons Inc., New York.
- Song, Z. and Liu, L. (1984) *Theories of Language*, Liaoning People's Press, Shenyang.
- Tomasello, M. (2003) *Constructing a Language: A Usage-based Theory of Language Acquisition*, Harvard University Press, Cambridge, Mass.

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