Noam chomsky's universal grammar

INTRODUCTION Based on the discussion of the validity of Noam Chomsky's perception of Universal Grammar (UG), some past ; current researches which maintain ; contest Chomsky's UG from different areas are represented.

The essay focuses on: 1) Chomsky's Universal Grammar in brief, in Second Language Acquisition (SLA) context; 2) Evidences supporting Chomsky's UG – views offered by linguists such as Williams and White, etc, to provide arguments to support UG pertaining to first language acquisition and second language acquisition; 3) Evidences refuting Chomsky's UG – according to Piaget and Haspelmath, etc, based on the insufficient assumption of SLA and also biological evolutions; 4) UG and language teaching; 5) and in the conclusion, I shall add my two-cent worth of perspective as a language teacher.) Chomsky's Universal Grammar in Brief Universal Grammar is the brainchild of Noam Chomsky, adopting the cognitive approach. Human beings have implicit knowledge of grammar but may not be able to explain how they get this ability. This is because they have no conscious awareness of the processes involved. 1) Universal grammar is a theory of knowledge: It is mainly concern with the internal structure of the human mind, suggesting that the speaker knows a set of principles that apply to all languages, and parameters that vary from one language to another.

It makes precise statements about properties of the mind based on specific evidence. It is important to note that the theory attempts to integrate grammar, mind and language at the same time. Chomsky considers UG to be comprised of what he terms " principles" and " parameters. " The term principles refers to highly abstract properties of grammar that underlie the rules of specific languages. Principles are thoughts to constrain the form that

grammatical rules can take and they constitute part of a child's innate knowledge of language. (Ellis, 1987, pgs. 30, 719) While principles function as the pool of possibilities from which a language can draw on in the construction of a grammar, parameters function to set limits on the options available to a specific language. It is differing parameter settings that cause languages to exhibit variations in grammars. 2) Competence and Performance: Chomsky says that native speakers may have grammatical or language competence (implicit/subconscious knowledge) of their native language, and yet be unaware of performance competence, also known as pragmatic competence (knowledge on actual use of language in actual situations).

Universal Grammar (UG) is concerned with what someone should know to have both language and performance competencies in a language. Thus, Chomsky's UG centralises on three main questions: 1. What constitutes knowledge of language? The linguist's duty is to describe what people know about language. 2. How is such knowledge acquired? The linguist has to discover how people acquire this knowledge. 3. How is such knowledge put to use? The linguist has to see how people use the language knowledge acquired. (1. a) Question 1: What constitutes knowledge of language? The linguist's duty is to describe what people know about language. When linguists examine grammatical expressions in English (or any other language), they find that a host of rules about how to utter grammatical sentences are structure dependent and that none are linear. It would be simpler in the sense of the number of steps involved and the calculations

required to form grammatical phrases if the rules of human languages were just linear, but in human languages they are not.

So, an analysis of what kinds of phrases and sentences are grammatical, and what kinds are not, shows linguists that structure dependency is a principle of universal grammar. In Chomsky's words, UG is " the system of principles, conditions, and rules that are elements or properties of all human languages. " This should not be too controversial; it just says that if we characterise the knowledge that a person has when s/he knows a possible human language, we find that some things recur in every case (Italian, Arabic, Russian, etc. and we call these ubiquitous things universal grammar (' universal' means ' general'). By whatever process we come to know languages, and whatever different things we come to know depending on whether we learn Rumanian, Chinese, or Hindi, knowledge of any language includes universal grammar, for example structure dependence. UG, therefore, is part of the knowledge that resides in the human mind of a person who knows a language. The science of linguistics tries to ascertain what constitutes universal grammar and what beyond universal grammar differentiates languages from one another.

I-linguists study expressions in particular languages to uncover basic principles which sometimes have a limited range of flexibility. For example, in this case, UG says languages must be head-first or head-last but different languages can choose which, though, having done so, they must then form all their phrases in accord. The basic principle and the subsequent choice between options have impact that ripples through all kinds of sentences.

Another discovery which I-linguists also unearth is what is called the " principle" which says that the lexicon of usable words in a language includes information about how each word behaves syntactically (for example, that a verb is transitive or intransitive) and that this information projects into the syntax of the language which must accommodate to the characteristics of each word and yet, not have any rules that duplicate or contradict those characteristics.

This principle is not as easy to understand as the head principle or structure dependency, but the relevant point for our brief survey of the field is that like those other principles, it too allows many testable predictions about what kinds of sentences can and cannot appear grammatically in human languages. I-linguist uncovers structure dependency.

By looking at the properties of expressions, the I-linguist determines that each grammatical phrase has what is called a " head" and that a specific language can either be " head-first" or " head-last," but that remarkably, whichever way it is, to a good approximation it will be that way for all kinds of phrases–noun, verb, prepositional, etc. This is quite a discovery about human language. There is nothing intuitive about it. None of us are aware of it. Yet at some unconscious level, we all apparently know it.

The discovery means that if you even vaguely hear just a few snatches of grammatical sentences from an unknown language and note that its prepositional phrases start with the preposition, then you know, automatically, without ever hearing one, that in any of its sentences all of that language's noun phrases and verb phrases will also be head-first. On

the other hand, if you hear a prepositional phrase or two with the preposition last, you will know that all the language's phrases will be head-last.

English is head-first: for example " in the bank" has its preposition first. There are other UG discoveries; subsystems such things as " X-bar theory," " case theory," " theta-theory," and " government theory," and " binding theory. " Each gives basic principles about how words can be combined to form expressions with specific structure and meaning, and each has flexible options that may be adopted or ignored by particular languages. Linguists conclude that the principles of universal grammar have certain associated parameters which can be fixed one way or another.

When a potential speaker knows universal grammar and sets all the associated parameters in particular ways, he or she knows the grammar of a particular language. As Noam Chomsky puts it: " We may think of the language faculty as a complex and intricate network of some sort associated with a switch box consisting of an array of switches that can be in one of two positions. Unless the switches are set one way or another, the system does not function.

When they are set in one of the permissible ways, then the system functions in accordance with its nature, but differently, depending on how the switches are set. The fixed network is the system of principles of universal grammar; the switches are the parameters… When these switches are set, a person has command of a particular language and the facts of that language: that a particular expression has a particular meaning, and so on. Each permissible array of switch settings determines a particular language. What this picture

implies is that rules of language-use no longer exist in their own right but must instead be explained as outcomes of interaction between the universal grammar that we all know, the parameters that we each set for our own particular language, and the lexicon that we each learn for our own particular language. So we already have a rough answer to our question, what knowledge constitutes a language: A person's particular language is the universal grammar, plus his/her particular setting of some number of parameters, plus his/her lexicon of available words.

The second question arises naturally: how does a person acquire his or her language-knowledge? (1. 2b) Question 2: How is such knowledge acquired? Chomsky and his fellow linguists argue that " certain aspects of our knowledge and understanding are innate, part of our biological endowment, genetically determined, on a par with the elements of our common nature that cause us to grow arms and legs rather than wings. Chomsky summarises: " It seems that the child approaches the task of acquiring a language with a rich conceptual framework already in place and also with a rich system of assumptions about sound structure and the structure of complex utterances. They constitute one part of the human biological endowment, to be awakened by experience and to be sharpened and enriched in the course of the child's interactions with the human and material world.

In short, " Language is not really something the child does; it is something that happens to the child placed in an appropriate environment, much as the child's body grows and matures in a predetermined way when provided with appropriate nutrition and environmental stimulation. " Four possible

hypotheses on how knowledge is acquired have been proposed: | | | No access hypothesis. UG is only used in first language acquisition. | | L2 learners have to use other ways of learning. | UG General learning mechanisms | | | | | | | | L1 L2 | | | | 2) Full access hypothesis.

UG can be used in both first and second language learning. In essence, it is | | possible to learn an L2 the same way we learn an L1. | | UG | | | | | | L1 L2 | | | | 3) Indirect access hypothesis. UG is not directly involved in L2 learning. But the learner can use what he or she | | knows of UG in their L1 to aid them in learning an L2. | UG | | | | | | L1 | | | | | | L2 | | | 4) Partial access hypothesis. Some aspects of UG are usable but others are not. The learner can use UG for some | | things but not for others. | UG | | Principles — Parameters | | | | L1 | | | | L2 | (1. 2c) Question 3: How is language knowledge put to use? Chomsky makes a key distinction between grammatical competence and pragmatic competence (the relation of intentions and purposes, i. . meaning, to linguistic output/use). Chomsky confines language acquisition to the domain of grammatical competence only. In other words, Chomsky does not view language as speech to be used in real-life communication with others, but rather, Chomsky views language as a set of pure, formal properties that are inherent in any natural language grammar. Chomsky makes this distinction because there is such great variability in the way pragmatics play out from person to person.

Further, pragmatic competence is more concerned with, to use Chomsky's words, " knowledge of conditions and manner of appropriate use, in conformity with various purposes, knowledge of form and meaning" (quoted in Johnson, 2004, pg. 31). In other words, pragmatics gets in the way and

interferes with what would otherwise be pure " core grammar. " Chomsky considers the separation of linguistic competence from pragmatic competence to be indispensable for practical reasons to the ability to uncover the pure, formal properties of the genetically preprogrammed UG.) Evidences supporting Chomsky's UG Some linguists lament that UG is a science that lacks fundamental but crucial research and classification of different languages, and some say UG does not offer the whole truth. However, according to Smith (2004, p. 7), the research of language should lie on the situation of ideals and abstracts and not labour on detailed outcomes. If science only focuses on the crucial things, then so many other finer things, such as poetic survivals, would have to be left out.

Taking as an example, for argument sake, when Galileo conceived the law of consistent acceleration for falling objects, either by dropping weights down the Leaning Tower of Pisa, or rolling balls down an inclined plane, the effect of wind resistance or friction is irrelevant to the generation Galileo was seeking to establish. To home in on this reckoning, let us also look at Boyle's law of ' ideal' gases, which in actual fact appear to ' misbehave', thus far from being ' ideal'.

Nevertheless, we do not take this observation to dismiss Boyle's discovery or to invalidate the idealisation. Science inevitably, at some moment or the other, needs to omit some factors which are not significant to the issue under scrutiny. The role of scientific experimentation is to get us closer to the truth, to the ideal, by eliminating irrelevant superfluous concerns. In other words, idealisation reveals what is real, but is usually hidden from the view by a mountain of details.

Scientists readily accept the inverse-square law, whether it is to describe the intensity of light reaching us from a star, or of the sound reaching us from a jet plane, or the force of a magnet, and conveniently disregarding the complexity of experiments even when their measurements never mirror it accurately. (3) Evidences refuting Chomsky's UG (3. 1) The available evidences that refute Chomsky's UG as ' fixed nucleus'. In late 1975, Piaget shared his understanding of language acquisition and simultaneously contested Chomsky's UG (Palmarini, 1983, p. 3). He posits that knowledge does not come from innate cognitive structures, but intelligence in the genes which creates structures through an establishment of successive chains of action and reaction. Piaget dispels how the randomness of metamorphosis enables a human being to acquire language. Martin Haspelmath deems that language acquisition is from Artificial Intelligence and not innateness, stating that children's language acquisition is completed during the process of learning through trial and error, either consciously or subconsciously.

Take the tense variant as an example. Most of the verbs' past tense are added '-d' or '-ed'. Children overgeneralise this rule and thus construct sentences such as " Father eated an apple" (Father ate an apple), or " I seed father" (I saw father). Parents and teachers (or other adults) then indirectly amend these mistakes by rephrasing, " Oh yes, father ate an apple" and " You saw father, John? ". After repeatedly hearing the correct form, children will finally grasp and correctly practise the concept of irregular verbs in the past tense.

Haspelmath's ' Connectionism', more commonly known as ' neural networks' or ' parallel distributed processing', states that a set of connections of simple

interrelated processing units, equivalent to a network of neurons in the brain, could draw regularities from available data, and even learn exceptions to those regularities, as is the acquisition of the English language regular and irregular verbs in the past tense form. (3. 2) The available evidences refuting Chomsky's UG as lacking of physical data and an exaggeration of language

Some linguists argue that Chomsky's research of UG derives from a rigid language modal, and that almost the entire research material is based on written material, overlooking other essential aspects of language. Penke and Rosenbach (2007, p. 261) recommend that we avoid linking ' competence' with the convention of written language or that the characteristics of the spoken language to the ' performance' level. Differences in the spoken and written structures should be critically deliberated as well.

Obviously, children learn languages through listening and speaking first and only later, through reading or writing when they begin formal education. Thus, it is this mode that we must first study, before progressing to other modular of language acquisition. Clark (2003, p. 185) notices that most of the time, children cautiously try a new word in already familiar constructions without a real sense of how the construction is evaluated. Children do not always know what they are doing (or saying). At this stage, they are ' exploring' the language, and acquisition takes place through trial and error, and correction.) UG and Language Teaching The UG model is mainly about language knowledge, specifically grammar. Its interests lie in what the speaker knows about language (grammatical competence), and not so much in how the speaker uses language (pragmatic competence). The UG theory neglects the importance in how people communicate socially, or how their

language behaviour affects situations. UG focuses mainly on the syntactic core; in other aspects, UG theory is simply disinterested. Perhaps these are exactly what should be learnt, since the rest is instinctive. The argument here means that UG is only one component of many in L2 learning.

The UG approach may indeed engage in the most important areas of L2 acquisition, those that are central to language and to the human mind. UG also stresses on the importance of vocabulary. The L2 learner spends little effort on phrase structure, but the learner needs, however, to gain an in depth detail about how individual words are used. Syntax learning is accomplished by more vocabulary learning, where the learner needs to gain word power, not just in the usual way of knowing their dictionary meaning or pronunciation but also in knowing the way they behave in sentences.

On the one hand, the study of classroom L2 learning needs to operate within a structure that must also include psychological models of speech processing, language development, affective and cognitive maturity, which is a sociolinguistic model of discourse interaction, and an educational model of the values and purposes of language teaching. After all, language is a means of communication, and communication is the purpose in a social interaction. It must also be experienced in the external world as actual behaviour.

In current teaching methodology, grammar and vocabulary are taught communicatively, so that learners can see the relationship between form and function. Grammar is learnt meaningfully to communicate ideas learners want to convey. Contemporary views of teaching and learning see communication and interaction as crucial to language learning. Traditional

syllabuses were determined with the class in mind and not in reference to the actual communicative needs in actual real world situations of the learners. Because of this, learners often cannot apply what they have learnt in the classroom.

The primary focus is no longer on a structurally graded list of linguistic items, rather it begins with an inventory of target skills. Learners' needs are determined in relation to which particular skills are required and consequently, a syllabus is built around the needs. 5) CONCLUSION In researching for this paper, I as a language teacher, could see why/how Chomsky has earned a bad reputation in some sectors of the applied linguists' community. On the other hand, I also feel that Chomsky should not be faulted entirely for his primary concern with the psychological dimension of the language.

Language clearly exists on both planes simultaneously, and linguists are surely free to choose which facet(s) of language they want to understand and attempt to explain. The assertion that language does not exist in the mind as an object, but rather as an activity in the social world, is not very successful in describing language. Can language remain active if it is no longer practised? Could ' speaking' in one's mind keep the language alive? If so, it must exist as a set of mental objects – both memories of utterances used previously, and as a dynamic system providing the potential for new utterances never before heard or read.

With reservations, I agree with Chomsky's argument that the human language faculty is genetically determined as a system that grows

spontaneously in the mind the way organs grow in the human body. There are differences between the way language develops and the way physical organs develop, most obviously. Language development is locally transformed, dependent on social interaction and environmental feedback. This is where Chomsky failed to resolve the biological reality of language (in the singular) with the social reality of different languages (in the plural).

It would be wrong, however, to choose between the two realities, and conclude that language is only a cultural artefact, like the wheel. The wheel emerged for the time in Eurasia about 5, 000 years ago, at almost the same time, as when writing came into existence. This was after 7 million years of wheel-less human history, in the words of Jared Diamond in his book, ' Guns, Germs and Steel: The Fate of Human Societies'. Language, on the other, has been part of us, in all parts of the planet, as long as we have been human.

The wheel and writing systems were invented by distinct cultural groups of humans in unrelated historical and geographical contexts, but spoken language evolved as a defining characteristic of the species. That does not mean that language is just the product of genetics. The current evidence suggests that language is a product of an interaction between genetics and the environment (called the epigenetic phenomenon). But the genetic element is there, even it is not specifically dedicated to language, as cases of Specific Language Impairment and experiments with chimps demonstrate.

Finally, it does not mean that by positing universal principles of language structure, Chomsky must be denying the possibility that different social groups can exhibit different ways of conceptualising aspects of the world

they live in. Clearly, Chomsky understands that individuals come to have different sets of language resources, as a function of the groups they socialise in. Speakers of one language may conceptualise in ways that are different from speakers from other languages, because of the conceptual categories that their languages and cultures govern. BIOGRAPHY BRAINE, M. D. S. 1971) On two types of models of the internalisation of grammars. In Slobin, D. I. (ed.), The Ontogenesis of Grammar. New York: Academic Press. CHOMSKY, N. (1969) Linguistics and philosophy. In Hook, S. (ed.), Language and Philosophy. New York: New York University Press. CHOMSKY, N. (1981) Lectures on Government and Binding. Dordrecht: Foris. CHOMSKY, N. (1988) Language and Problems of Knowledge: The Managua Lectures. Cambridge, MA: MIT Press. COOK V. J. (1989b) Observational evidence and the UG theory of language acquisition. In Rota, I. (ed.), Logical Issues in Language Acquisition.

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