

# A Review: How Syntagmatic & Paradigmatic Relations Are Significant for Language Learning?

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## Abstract

When considering language, grammatical units engage in two different kinds of relationships: paradigmatic relationships (word choices that fall into the same category, such as noun, verb, etc.), and syntagmatic relationships (the word chain i.e. s-v-o). For the creation of meaningful language, these two interactions are interdependent. While the paradigmatic relationship establishes the purpose of certain language constructs, the syntagmatic relationship provides the framework for language. This study explores the influence of these relationships and how they affect language acquisition. Studies have demonstrated that syntagmatic and paradigmatic relationships are appropriate for language development.

**Key Words:** Syntagmatic Relations, Paradigmatic Relations, language learning.

## 1. Introduction

Grammar, coherence, organization, presentation, and cohesiveness are the major criteria used to evaluate a language skill (Chen, 2023). When compared to students in primary, secondary, and higher secondary schools, it is highly worrisome to learn that students' language abilities still require improvement at the postsecondary level (Han, 2021). Because the fundamental language concepts are neither adequately taught nor learned, there isn't a single area of language learning that can be deemed perfect for any academic level.

A sentence's logic is based on syntagmatic and paradigmatic relationships. These connections provide a comprehensive grasp of a statement. Every linguistic unit has limitations on the contexts in which it can be used, according to Lyons (1979). Syntagmatic relation is between other units of the same level with whom it appears and which define its context, whereas paradigmatic relation is a condition where all associated units can exist in the same context. This passage justifies the limitations on language use and the conditioning of word substitutions. The understanding of linguistic restrictions is a condition of language learning.

### 1.1 Saussure's Structuralism

The father of structural linguistics—now known as "descriptive linguistics," Ferdinand de Saussure was a Swiss academic who is credited with founding modern linguistics. He made his mark by releasing his extensive study on the proto-Indo European vocalic system at the age of twenty, while still a Leipzig student. Three years after his passing, two of his pupils, Charles Bally (1865-1947) and Albert Sechehaye (1870-1946), used the lecture notes from his "Cours de linguistique generale" to write a book that would launch modern linguistics by attempting to

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investigate language. One of the key texts in the history of linguistics is considered to be *Cours de linguistique générale*. Bloomeldian theory derives from Saussure (1857), one of the pioneers of modern linguistics. Bloomeldian structuralism is influenced by a number of contemporary linguistics pioneers, including Saussure (1857). In contrast, Saussure stated that language is right to see in terms of signs which are comprised of signifiers and signified. Saussure himself never used the word "structuralism."

The signified is the mental notion connected to sign, while the signifier argues about the physical properties. Both signifier and signified share arbitrary relationship as there is no internal or natural connection between the notion and the auditory sensation. A key tenet of structuralist theory is the arbitrariness of the sign, which ensures that no extralinguistic elements affect how signs are constructed. It is essential to structuralism's success. According to Thibault (2013), Saussure's theory marks a significant departure from the earlier linguistic theories and described language as separate from literature and a complete system in itself. The linguistic community is the only one who can set up the relationship and distinction of signifier and signified (Saussure, 1916/1983). *Langue* should be the focus of linguistics research, according to Saussure, as it tells the properties of discrete language and also how it is different from *parole*. Saussure used chess as an analogy to convey the concept. The game's rules, together with the pieces and the board, serve to define chess. Individual movements and actual chess games are only fascinating to the players; they are not necessary to understand the rules of the game (and could even be confusing). In a similar vein, whereas particular utterances may be intriguing to the users of language, which in turn not necessary for describing the complete system of language. Synchronic linguistics examines language at a specific moment in time, while diachronic linguistics analyses the language across a longer span of time. There are only changes in the language itself (Saussure, 1916/1983).

## 1.2 Syntagmatic and Paradigmatic Relations

Asher (1994) says that the relationship of one word with other words in a phrase or text is called a syntagmatic connection. However, paradigmatic connection covers the semantic link of words which permits the replacement of one word with another in the same categories (Hjrand, 2014). Paradigmatic interactions are frequently used as the foundation for ontologies and thesauri. When a unit is coupled with other units of the same level within a syntax-gm or construction, syntagmatic linkages are established. Paradigmatic connections contracted by units are those relationships that exist between a particular unit in a syntax-gm and other units that can take its place. The syntagmatic relation is the straight line that connects one linguistic unit to the other linguistic units in an utterance. Murphy (2010) The concept of *velour* is compatible with the assumption that meaning has a strong linguistic foundation. There is a difference between the words "sheep" in English and "mouton" in French. The phrases lacks the same *valeur* since there is distinction in between "mutton" and "sheep" in English language, when compared to French, even if it is feasible to argue that both terms have a comparable extralinguistic (i.e. referential) meaning. Saussure divides the functional differences between signals within a language into two categories: syntagmatic linkages and paradigmatic connections, in order to better grasp the idea of linguistic meaning.

Syntagmatic relations connect elements that occur together in the text and relate to the text's setting. It is a linear relationship between linguistic components that emerge in subsequent combinations. One example of words in a certain order is those in a statement like "I am a student." Since syntagmatic relations are combinatorial relations, words can be combined with one another.

A syntagm is a similar structured arrangement of language components. Examples include the letter syntagms that make up written words, the word syntagms that make up sentences, and the phrase syntagms that make up paragraphs. Conversely, paradigmatic relations are interactions that connect items that don't appear together in the text. Since they exist in the same context but not at the same time in the sentence "I am writing/reading," the terms "writing" and "reading" have a conceptual connection. Because paradigmatic relations are substitutional interactions, linguistic entities have a relationship when choosing one precludes choosing another. Consequently, a paradigm is a group of these interchangeable items (Cohan & Shires, 1988). Numerous scholars have drawn attention to this difference of these relations also the co-occurrences of lexical items are realized as paradigmaticity on both qualitative and quantitative measures (Schutze & Pedersen, 1997). Through quantitative it gives a more solid statistics, and qualitative as it is more likely that two words that are nearby rather than on the same page will have significance. A syntagmatic use of context, on the other hand, can only be utilised for extremely popular keywords, according to Picard (1999).

### **1.3 Paradigmatic and Syntagmatic Relations: Their Relationship**

The conceptions of syntagmatic and paradigmatic links, co-hyponym-like paradigmatic relationships are most common. Even though they are less strong as family ties, paradigmatic interactions do show intriguing patterns. Additionally, distinct route depths have different kinds of paradigmatic links. These pathways particularly express how ideas are connected. Results show that while there are some paradigmatic ties between more specific ideas, they are frequently stronger than those between more general conceptions.

The connection between syntagmatic and paradigmatic interactions is what drives the discussion over whether one may impact onto the other or not? Paradigmatic data should be produced by gathering syntagmatic data (Gardin, 1969). Moreover, these two concepts have a strong association that may be a paradigmatic relationship when they are consistently attributed to the same sources. This situation fits into one of two categories: One is that the two ideas have a simultaneous syntagmatic and paradigmatic link. Here, two concepts are closely related to one another. The second situation is when two ideas have a syntagmatic link but paradigmatic relationship is not found. A paradigmatic relationship is heuristic (Hjrlund, 2014) and changes on the availability of new information (Murphy, 2003). This may be due to local people' lack of comprehension of the paradigmatic link between these two ideas. These syntagmatic links may therefore hint at certain paradigmatic relationships and facilitate knowledge acquisition.

## **2. Related Literature on Syntagmatic & Paradigmatic Relations**

Researchers in several domains have expressed interest in the importance and use of syntagmatic and paradigmatic links since their inception (Saussure, 1916). Numerous disciplines, including linguistics, applied linguistics, media, science, medicine, etc., are researching the effects of employing these connections. They have been used in text analysis by researchers, and instructors have suggested that they have a significant impact on the development of language abilities. The topic analysis used for the current review investigation is as follows:

## 2.1 Word Dimensions

The link between concepts can also be related to via semantic interactions, according to Khoo and Na (2006), despite the fact that the word dimension has been the focus of many investigations. This is generally agreed that syntagmatic relations tell about the position of language items where paradigmatic relations deals with the choices every word have. Now, this still calls for a debate that a single word may cater both syntagmatic and paradigmatic links simultaneously. A paradigmatic connection, according to Sahlgren (2006), unites ideas that do not exist together in the text. However, Evens (1980) argued that paradigmatic links can have syntagmatic manifestations. Adjectives and conjunctions which are related to paradigmatic relationship typically appear in the same sentences. Furthermore, some concepts form syntagmatic links are also related paradigmatically (Enguix et al., 2014). The study also concludes that how syntagmatic and paradigmatic relations may coexist in the actual world and how they might interact. Yoon (2012) assigned MeSH (Medical Subject Headings) descriptions which serve as a representation of syntagmatic relations. The MeSH thesaurus was used for the construction of paradigmatic links. The study used PubMed and 97 papers were selected to find out the relationship of syntagms and paradigms over one another.

According to Sun et al., current vector space representations are either syntagmatic or paradigmatic (2015). These fine-grained regularities have recently been found to be useful in tasks involving natural language processing. They jointly modelled these two linkages to imply linguistic property unification (syntagmatic & paradigmatic). The recommended models are trained using data from the open Wikipedia corpus, and tasks that compare terms with and without similarity are used to evaluate the learned representations. The results demonstrated that the recommended models could significantly outperform all of the state-of-the-art baseline techniques on both tests. Mattheoudakis (2013) studied the developmental shift in response type through a qualitative analysis of Greek word associations. It especially looks at whether connections formed by Greek speakers with reference to the syntagmatic and paradigmatic shift support the findings of similar study done in other languages. To do this, a translated Kent-Rosanoff exam was administered to Greek-speaking adults and kids. Since the responses of adults tended to be more syntagmatic and those of children tended to be more paradigmatic, the study's findings desupported syntagmatic-paradigmatic transition. The researcher discussed the notion of the syntagmatic-paradigmatic shift, argues for further research into the relationships between Greek words in particular, and also generalised it to other languages.

Researchers Khazaenezhad et al. (2013) found that if speakers intend to find any word from any sentence then this needs to go through the interference of syntagmatic and paradigmatic relations. The words chase and string, in addition to similar rivals like dog and cap, are triggered when the word cat is accessed in the sentence "The cat pursued the string." It was proposed that the same lexical access stage was impacted by both types of interference. This was addressed by reviewing connectionist production models that are processed on errors. The syntagmatic interference could be minimized, by creating a system known as the syntactic "traffic cop," which consists of excitatory and inhibitory connections between syntactic-sequential states and lexical units. Data on word and sentence development from speakers with normal and aphasic speech are compared to the models. Zareva and Wolter (2012) experimentally tested three distinct word association (WA) analysis methods and contrasted their findings. Traditionally, researches on L1 & L2 used associative commonality, nativelikeness and lexico-syntactic patterns of associative organization. The collocational component of associative replies was also presented for contemporary analysis.

Fundamentally, the concept of the study was to reflect the flaws of the comparison of the lexicon of mother tongue and target language since each approach is different in terms of lexical organization. The value of each technique as a tool for research and assessment may also be indicated by how well it can represent differences in proficiency. The results showed that two more "promising" ways to look at WAs than in connection to nativelike associative commonality studies are to look at the lexico-syntactic patterns of associative organisation and the collocational component of associative links.

There is still room for more research to learn more about how the mental lexicons of L2 learners may be set up and how word association behaviour may vary depending on L2 proficiency level, according to Oppenheim and Kittredge (2008). They noted that word association research over the past few decades has provided precise insight into the development and organisation of the mental lexicon. This study's objectives were to use a psycholinguistic experiment to evaluate the development of the mental lexicon and, more specifically, to examine the possible effects of L2 language proficiency on Iranian EFL learners' word association patterns. To achieve this, 120 undergraduate EFL students were given a normal English placement examination as well as a word association exam (OPT). Using Peppard's (2007) method, the induced responses were categorised, and the frequency of various word associations was then investigated. The results revealed that responses from upper intermediate students significantly outweighed those from beginners in the syntagmatic link of "Grammatical collocation," whereas the latter group dominated the former in the paradigmatic relations of "Synonymy" and "Hypernymy and Hyponymy."

Magnus (2006) created the word-space model, which uses the distribution of words in patterns gleaned from enormous amounts of text data which described the commonality of semantic entities. This model has been successfully used for more than a decade in several researches and their applications. They still have a hazy understanding of the word-space concept theoretically, despite it being widely used and extensively investigated. It was proposed that the word-space model would attain and represent both syntagms and paradigms. This depends on the usage of the distributions of word patterns. The word spaces are different for both sentence relations and this is proved by numerous researches of synonyms, antonyms, word classes and thesaurus. Jarman (1980) did research on the roles of language in two separate schools of thought and concurrently claimed that language acquisition and conceptual development constitute a crucial distinction for paradigmatic and syntagmatic patterns. One of these traditions is word association study, which incorporates developmental and experimental studies, and is well represented by the work of A.R. Luria. It was suggested that in order to strengthen the theoretical foundations of paradigmatic and syntagmatic processes, individual differences should be merged with diverse tactics. Nelson looked at four types of ideas in 1977 concerning the syntagmatic-paradigmatic transition in children's word associations: (a) associative strength, (b) syntactic, (c) semantic, and (d) cognitive theories. However, warnings were suggested for the phenomenal generalizability. This was also recommended that alteration in conceptual structure and language learning experiences of children may support the findings.

### **2.1.1 Linguistic Functioning of Children**

The difference between syntax and paradigm is the discovery of the classes of word and the rules of constructing sentences. The term "syntagmatic paradigmatic shift" describes how young children typically respond in paradigmatic ways whereas adults tend to respond predominantly in syntagmatic ones. This transition is more likely to occur between the age group of 5-9. This

modification is significant due to how it relates to theories regarding word connections in general and how it may affect children's cognitive and language development. It is also notable since it seems to be connected to qualitative shifts in other cognitive and linguistic domains, most notably the transformation from preoperational thinking to logical concrete processes (Piaget, 1970). As a result, it seems relevant to the study of how language and early cognitive development interact. Like, is there now a broad cognitive reorganisation as evidenced through syntagmatic and paradigmatic word connections? Or does it stand for a merely linguistic framework that supports cognitive restructuring? Or is the change in the outcome is notable for developing other rational processes (White, 1965)? Brown and Berko (1960) progressed the child's "gradual organisation of his vocabulary and syntax". The developmental tendency from heterogeneous to homogeneous replies is a consequence of this major gain in syntactic operations, according to their observations that word syntactic similarity becomes a more important feature in word association as children learn to utilise syntax. The syntagmatic-paradigmatic change's first substantial linguistic justification was provided by this. The nonsensical syllable usage test has been linked to it in the past, but it is still the subject of debate, especially in light of how it relates to the development of language use. Brown (1957) has shown that infants may already allocate new words to construct classes in a suitable manner. As early as age 3 or 4, children are able to use words from the same form class in phrases.

Ervin's (1961) study, which included kids in kindergarten through sixth grade and employed different word classes, confirmed the results of Brown and Berko. The bulk of the kindergarten pupils' responses were syntagmatic excluding nouns alongwith a significant increase in paradigms. The paradigmatic reaction grew earlier for words that commonly come at the end of sentences (i.e., nouns) than it did for words that typically occur in medial regions (ibid).

Two words are considered to be connected if they may exist in the same sentence context. The hill may come to mind when you hear the phrase "we ascended," but "the mountain" is really where we got to. It was believed that this procedure operated via a sequence of predicted closures. So, the terms hill and mountain would begin to be associated. The drop in syntactic connections and the rise in paradigmatic linkages were attributed to the growth in the quantity and also in language experiences through sentence relations. Ervin created the theory of contextual similarity by researching language structure and classical association. Well known count nouns in the approx. ages of 5 & 6 were predominantly paradigmatic (Brown & Berko, 1960; Ervin, 1961). They, as well as many who came after them, recognised that this can be an early step for understanding paradigmaticity in responses. An alternative perspective asserts that nouns are fixed and paradigmatic. Entwisle et al. (1964) advanced a conduct of 4 & 5 year children and titled it as "basic noun response". Here children were asked to react every query majorly with nouns. Younger children's protocols usually contained multiword responses as well as multiple "clang" responses. In the selected age group, the syntagmatic-paradigmatic shift was observed for word classes except nouns and adjectives. Palermo and Jenkins (1963) followed alterations in fourth- and fifth-graders' word associations from 1916 to 1961 in a distinct early study. They found that paradigmatic response for both nouns and adjectives increased by at least 10% from the earlier to the more current norms using the identical word sets. They observed a relationship between the use of contrasts and the paradigmatic response (or, in the words of Woodworth and Schlosberg (1954), "opposites" and "coordinates"), and they hypothesised that both effects were related to increased confidence in these types of tests.

## 2.2 Effects on Grammar Learning

Researchers Namaziandost, Esfahani, and Khajehpour (2018) investigated the syntagmatic and paradigmatic links between grammar learning and learning outcomes for Iranian pre-intermediate EFL learners. The outcomes showed that the experimental group did much better than the control group and proved that syntagmatic and paradigmatic based lessons improved the listening grammar abilities of Iranian EFL students. Potapenko (2017) asserted in a separate study that language learning is integrated on syntagmatic and paradigmatic ties. He lists five different types of syntagmatic constructions in the English language: immediate, consisting of two or three words; modified with various types of attributes; extended, consisting of several immediate constructions within one utterance; supersyntactic related across two utterances; and textual occurring throughout three and more utterances.

According to Faes, Gillis, and Gillis, grammatical development has been shown to be impaired in children with CI (2015). However, the study has mostly focused on one aspect of grammatical development, either morphology or syntax, rather than emphasising spontaneous speech. In this study, the grammatical growth of kids with and without cochlear implants (CI) in their natural Dutch speech was examined. The syntagmatic and paradigmatic evolutions will be compared and evaluated. Results demonstrated that youngsters with cochlear implants catch up to their classmates who can hear normally on both measures of syntax and morphology. It has been established that inflection in CI children develops before sentence length.

## 2.3 For Scientific Persuasion

Latour and Woolgar (1979), Bazerman (1988), and others proposed "narrative, that convince with evidence" as a model for scientific publishing (de Waard et al., 2006; de Waard et al., 2009; de Waard and PanderMaat, 2009). The persuasive aspect (how assertions are made and interpreted) is the focus of many campaigns, and much study has been done on the data aspect across a range of platforms (Waard, 2010). The narrative component of this study, *The Story of Science: A Syntagmatic/Paradigmatic Analysis of Scientific Text*, prompted the researcher to address how a scientific paper is comparable to a fairy tale and how tools created for parsing and accessing fairy tales might be applied to enhance access to scientific writings. This study was separated into three sections: a quick summary of the examination of fairy-tale structure, a discussion of some prospective applications for tools and technologies that may be created within the digital humanities to broaden public access to scientific information.

## 2.4 Ramifications for Vocabulary Instruction

Wolter (2001) says that the syntagmatic-paradigmatic transition has to be reevaluated in order to accommodate non-native speakers. By assisting students in making stronger semantic links between words, the study makes important recommendations for vocabulary education. Prior research assessing the effect of contextualised and vice versa activities for vocabulary teaching noted that students could comprehend meaning and structure or not, claims Webb (2007). There is little evidence, according to research, to suggest that context helps people learn new words. Decontextualized tasks typically function equally as well as or better than contextualised tasks when it comes to creating understanding of meaning and form. The study examined how, in addition to grammatical functions, context influenced orthography, syntagmatic association,

paradigmatic association, meaning, and shape effect the knowledge of language. EFL students of Japan were taught the target words in word pairs and one glossed sentence. The target words were evaluated in ten distinct ways to assess the improvement of vocabulary learning. No appreciable difference was recorded on subject performance between those who studied word pairs and those who viewed target words in a single glossed sentence. This demonstrates that a single glossed phrase context may not have a major influence on vocabulary understanding.

## **2.5 Semiotic Analysis**

Val Larsen (2005) makes the case that semiotic analysis luckily possesses the nomothetic integration, specificity, and breadth required to offer a theoretically informed social scientific investigation of visually complex persuasion. That nomothetic description of the image may make use of the distinction between syntagmatic and paradigmatic icon sequences as well as the technical notation created in this study for expressing several ways to arrange the same iconic information in advertisements. He emphasized the advice given by Scott, McQuarrie, and Mick (1999, 2002), who highlighted the fact that researchers who study visual persuasion usually have a thorough grasp of response processes but little of ad stimuli.

## **3. Discussion**

Language is a skill that requires ingenuity and repetition to develop. Lessons in English are taught in Pakistani classrooms mostly using the lecture method, with little emphasis placed on discussion or practice. Students who are wholly unfamiliar with the target language are exposed to it less through this exercise. The four pillars of a language lesson are the instructor, the student, the material, and the sociocultural context. This connected fact is disputable because studies by Coleman (1996), Holliday (1994), and Canagarajah (1999) who conducted their research in Indonesia, Egypt, and Sri Lanka came to the opposite conclusion. These researchers contend that it is impossible to fully comprehend classroom conduct without looking at teachers' and students' actions.

This further emphasizes that authentic literature should be made available to students, which is a helpful suggestion for the targeted innovation. Local teachers, according to Holliday, are better at implementing new methodologies than foreign teachers because they are more familiar with the local educational system and can relate to pupils on a more personal level. As socio-cultural sensitivity can only be felt by someone who is native to the area, this fact makes it simple to build a connection between teachers and pupils, which is essential to integrating any change. Additionally, this study takes a similar approach to Canagarajah, which may help people better grasp situations from an insider's perspective, which Coleman has referred to as the privileged status of an insider.

Every class's syllabus serves as its foundation and guide, ensuring its success via careful planning. Although it is a tool in the hands of the instructor to conduct effective lessons, designing language syllabi is a very challenging undertaking to complete. The main challenge is identifying the precise needs of the target audience. In general, it is criticized that our local curricula have not been regularly revised. The materials offered by Higher Education Commission (HEC) Pakistan include all significant grammatical elements that are theoretically taught. Cameron (2001) makes a comment that the child is an active learner and thinker, constructing his or her own knowledge from working with objects or ideas. (p.4). This information may be arranged into a schema (Fisher,



2005), a conceptual framework that adapts and expands over time based on how a learner interprets and uniquely personalizes information in light of prior experiences. (Bennett & Dune, 1994). Participants may have been better able to develop learners' incomplete, confusing, or erroneous schemas by determining what each individual knows. (Bennett & Dunne, 1994).

#### 4. Conclusion

By revisiting Ferdinand de Saussure's sentence relations in language learning, the current work fills the gap. At all academic levels, a true comprehension of these relationships could offer a special improvisation in the acquisition of grammatical norms. Analyzing syntagmatic and paradigmatic relationships may also offer students a useful method for self-evaluation. This will also demonstrate how each course topic is interconnected with the others, and how faulty understanding of one will have an impact on the others. Language knowledge is dependent on theories, and further models, strategies, and pedagogies need to be investigated.

This study proposes that syntagmatic and paradigmatic relationships have a favourable effect on language acquisition and learning both. The researches stated above have shown how syntagms and paradigms have an influence on word dimensions, children's language development, grammar learning, scientific inducement, vocabulary education, and semiotic analysis. Despite having a longer history than a century, syntagmatic and paradigmatic relationships are still relevant for study, instruction, and learning across all literary and linguistic genres.

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