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Chafe's Semantic Structure Processes Versus Halliday's Systemic Functional Grammar Processes

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A B S T R A C T

Processes are seen as a language phenomenon involving the participant of various language elements realized by verbals, nominal groups or adverbials. How these elements occur in the processes depends on linguists' concepts of processes. The paper aims to consider Chafe's processes and Halliday's Systemic Functional Grammar processes to see what similarities and differences are. The study was conducted with qualitative methods in order to analyse materials and analyse the data collected. The data include samples extracted from four literary works in English which are *The Man of Property, The Old Man and the Sea, the Call of the Wild* and *the Moon and Sixpence.* The findings can point out some differences and similarities of processes by Chafe and Halliday. At the same time, the results will help those who pay much attention to this language phenomenon have a deeper understanding in order to equip themselves with background knowledge of language learning and research.

A R T I C L E   I N F O

I.   INTRODUCTION

Processes in language can be extensively exploited by linguists and researchers. This is a matter of study of linguistic theory. Chafe (1970) studies processes in relation to states and actions in semantic structure. Halliday (2004) discusses processes based on the ideational meaning which construes people's experience of the world around and inside them. So far, there has not been any study of Chafe's processes in a comparison with Halliday's Systemic Functional Grammar processes. A study of this perspective in order to point out similarities and differences will be beneficial for the researcher and for those who pay attention to it so that it can help them better understand the phenomenon of language.

As we know language, in general, has been studied by linguists followed by various trends and approaches. Saussure (1916) affirms that language is a system of signs which consist of two purely psychological elements 'signified - concept and signifier - sound-image'. The nature of the signifier is linear, so words in language are chained together to create the chain of speaking followed the so-called syntagmatic rule. Peirce (1931) offers a triadic model consisting of three elements: (i) the representamen - the form which the sign takes is called by some theorists the 'sign vehicle', (ii) an interpretant - not an interpreter but rather the sense made of the sign, (iii) an object - something beyond the sign to which it refers (a referent). If Saussure (1916) mentions the

relationships inside the language, Peirce (1931) focuses on the relationships between the language and the world. As we have seen, Saussure's signified is not an external referent but an abstract mental representation. The object in the Peircean model allocates a place for materiality and for reality outside the sign system which Saussure's model does not directly feature. Rejected Peircean approach, Morris (1938) proposes a threefold division of a sign into a sign vehicle, designatum and interpreter. The trichotomy refers to the syntactics which studies the formal relation among different signs, semantics which studies the relation between the signs and the objects they denote, pragmatics which studies the relation of signs to their interpreters, i.e. people. Chomsky (1965) suggests language through form independently of function and meaning under the theory of the Transformational Generative Grammar (TGG). Following the structural linguistics, Chafe (1970) discusses semantic axes in language including the actor-action axis, the action-goal axis, the possessor-possessed axis and the coordination axis as constructional meanings. Halliday (1985/2004) studies the language through meaning (i.e. its function) which can shape form, i.e. it is designed for functional components of meaning and how the language is used in Systemic Functional Grammar (SFG).

On the basis of the structural linguistics by Saussure, Peirce and Morris, Transformational Generative Grammar by Chomski and Firth's London school of linguistics in understanding 'the context of situation' laying the foundations of systemic functional grammar, Chafe and Halliday develop language categories in particular in their own language approach and trend. The category of processes is a typical case. Regarding Chafe (1970), processes are observed in relation to states and actions based on the semantic structure while processes by Mourelatos (1978) are in a comparison with states and events. As for Halliday (2004), processes originate from the ideational meaning construeing people's experience of the world around and inside them, and they are in a relation to participants and circumstances. In total, the processes by Chafe (1970) are exploited from the semantic structure but the processes by Halliday (2004) are operated in the framework of systemic functional grammar.

As far as it is concerned, the authors refer processes to the different approaches so the processes by them manifest some various points. The study will clarify this and bring a deep understanding for those who attach importance to it in their language learning and research.

II. METHOD

Research questions

What are the similarities between semantic structure processes and Halliday's systemic functional grammar processes?

What are the differences between Chafe's processes and Halliday's processes?

Research methods

The study was conducted using qualitative method in order to analyse materials and analyse the data collected. The data include samples extracted from four literary works in English namely The Man of Property, The Old Man and the Sea, the Call of the Wild and The Moon and Sixpence. The data were chosen based on the concept of processes by Chafe (1970) and Halliday (2004), and were sorted out into two groups of views as the typical examples for the analysis. Based on the theoretical framework of processes. An analysis and comparison of the processes were carried out in order to find out the similarities and differences between Chafe's processes and Halliday's processes.

Sampling and population

The population of the study was built based on the criterion recognizing processes by Chafe and processes by Halliday. It involves samples collected with the technique of probability sampling. The samples collected will be randomly chosen so as to bring a population including 100 samples, of which 50 are the processes by Chafe and 50 are the processes by Halliday. They are used as typical examples for the analysis and the comparison of the language category differentiated between the two linguists.

III. THEORETICAL CONCEPTS

Process

Processes are the category of language differently understood by linguists. Generally, they symbol changes or transformations happening within clauses. They involve the key participation of verbs together with other elements in the clause such as circumstances or participants determined by Chafe (1970) and Halliday (2004); or such other elements as actor, sensor, carrier, behaver, sayer, goal, phenomenon, attribute, receiver, verbiage and existent by Halliday (2004). To recognize the

processes, it is crucial to consider the verbs appearing in the clauses.

Chafe and his semantic structure processes

Chafe is a linguist trained at a structuralist school at Yale in the mid-1950s. He is influenced by Chomsky in his conception of language structure. It is the recognition of transformations or of a disparity between deep and surface structure (Chafe, 1970, p.6), which is distinguished from each other via semantic structure discovered by Chafe. He thinks language as 'semantic units, structured in a certain way, being linked to phonetic units' (Chafe, 1970, p.8). The author put language in a H-shaped model in which the left vertical line represented semantic structure and the right vertical line represented phonetic structure in Figure 1 (p.8). The theory of meaning and the structure of language born is Chafe's great contribution to the development of linguistics.
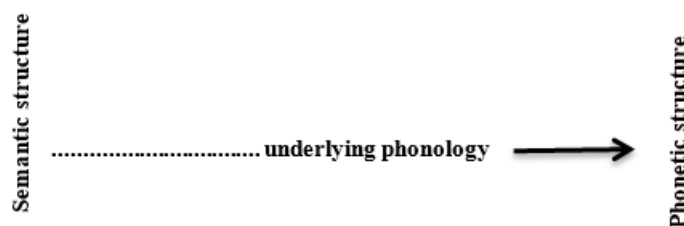

Fig 1. Model of language structure (Chafe, 1970)

According to Chafe (1970, p.100), semantic structure processes in a pure sense are a change of state or condition of nouns as patients of verbs, and they are distinguished from actions accompanied by agents. In a wider sense, Chafe (1970) involves the participation of verbs in the processes and even in the actions. A verb will determine a process, an action or both a process and an action. As a process, it changes the condition of a noun. As an action, it expresses what someone, its agent, does.

For Chafe (1970), verbs provide four semantic specifications as follows:

(V) state   (V) process
(V) action   (V) process = action

The author explains more that a verb which is specified as a state or a process requires the accompaniment of a patient noun. When a verb determines both a process and an action, and has a patient noun and an agent, then 'proverbalization affects the entire configuration of verb plus patient, not simply the verb alone' (Chafe, 1970, p.103). For example:

Harriet broke the disk.

She did it (that is, broke the dish) accidentally.

The adverb *accidentally* modifies *broke the disk* as a unit, not the verb only.

(Chafe, 1970, p.103)

Vendler (as cited in Mourelatos, 1978) shows that verbs play a key role in determining activities, accomplishments, achievements known as processes, developments and punctual occurrences respectively, and states. The author states that 'achievements can be indefinitely placed within a temporal stretch, but they cannot in themselves occur over or throughout a temporal stretch' (p. 416). Accomplishments, by contrast, have intrinsical duration but are not homogeneous like activities. Verbs in the case of accomplishments can refer to the whole of that time segment, not just refer to a single moment, for example, '*Jones wrote the letter over the lunch break*' and '*John could not write it* in the first quarter of the time' (p. 416). But if *John is running for half an hour*, this means that *John is running* at every moment within that period. Therefore, Vendler points out that 'any part of the process is of the same nature as the whole (p.416). States exist and last over stretches of time differently from accomplishments and activities because they cannot be qualified as actions at all (p. 416).

Halliday and his processes

Halliday is a linguist worked in multiple areas of linguistics, both theoretical and applied. Systemic Functional Grammar (SFG) is the functional language approach first enlightened by Halliday and his followers during the 1960s in the United Kingdom, and later in Australia (O'Donnell, 2012). SFG is built on the base of previous studies of some influential linguists such as Malinowski and Firth. Malinowski (1935) focuses on 'context of situation' which plays an important role to fully understand an utterance. Firth (1935) applies Malinowski's view about the focus of the 'context of situation' to his linguistic study. He

agrees that the study of meaning is the nature of linguistics. As for Halliday, 'systemic theory seen as a theory of meaning as choice, whatever is chosen in one system becomes the way into a set of choices in another' (Halliday,1985, xiv).

In the position of Halliday (2004), a process consists, in principle, of three components: (i) a process unfolding through time, (ii) the participants involved in the process, (iii) circumstances associated with the process as shown in Figure 2, for instance, *Birds are flying in the sky* of which the process is *"are flying",* the participant *"bird"s* and the circumstantial element *"in the sky".*
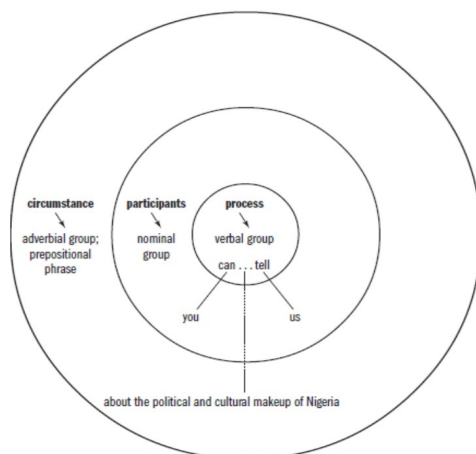

Fig 2. Configuration of process elements (Halliday, 2004)

Halliday (2004, p.176) shows that processes are 'the most central element in the configuration'. Participants are close to the central element, and they are in a direct involvement in the process, bringing about its occurrence or being affected by it in a certain way (Halliday, 2004, p.176). Circumstances are more peripheral, and are not directly involved in the process but they reinforce the centre temporally, spatially and causally (Halliday, 2004, p.176). Halliday (2004) explains that three components of a process lie behind the grammatical distinction of word classes into verbs, nouns and adverbial groups or prepositional phrases, as shown in Table 1.

Table 1. Elements of processes (Chafe, 1970)

Type of elements	Typically realized by
Process	verbal groups
Participant	nominal groups
Circumstance	adverbial groups or prepositional phrases

participant	Process	Circumstance
nominal group	verbal group	adverbial group or prepositional phrase
The rain	began to fall	very heavily.

In Systemic Functional Grammar by Halliday (1985/2004), processes are formed on the base of the ideational meaning showing people's experience of the world. Halliday divides them into six types as illustrated in Figure 3 namely (i) Material process, (ii) *Mental process*, (iii) *Relational process*, (iv) *Behavioural processes*, (v) *Verbal processes* and (vi) *Existential processes*. Each involves such elements as processes, participants and circumstances.

The Material Process construes doings-and -happenings such as actions, activities and events (Halliday, 2004, p.179). It is concerned with people's experience of the material world called 'outer experience' (Halliday, 2004, p.197, 212). A material clause is formed by particular structural configurations namely *Actor + Process + Goal (+Recipient),* and *Process + Range.* Each always has an Actor realized by a nominal group or even a non-finite clause. The Mental Process is concerned with people's experience of the world of their own consciousness called 'inner experience' (Halliday, 2004, p.197, 212). It

construes sensing, perception, cognition, intention, and emotion. This type is formulated by *Senser + Process + Phenomenon*. Each clause always includes a Senser realized by a nominal group denoting a being endowed with consciousness. Relational Process refers to 'being and having', and is a combination of both outer experience and inner experience (Halliday, 2004, p.210-212). Relational processes consist of three types - 'intensive', 'possessive' and 'circumstantial', and each type is recognized in two modes of being - 'attributive' and 'identifying' (Halliday, 2004, p.215). In the attributive mode, an Attribute is ascribed to some entity called Carrier, and the process follows the formula *Carrier + Process (intensive) + Attribute*. In the Identifying mode, one entity is used to identify another (Identified) called Identifier, and the process is formulated by *Identifier + is + Identified* or *Identified + is + Identifier*. Behavioural

Processes are processes of physiological and psychological behavior, like smiling, coughing, laughing, breathing, dreaming and staring (Halliday, 2004, p.248). They are intermediate between material and mental processes. The participant labelled Behaver, is typically a conscious being like Senser, but the process functions more like one of 'doing'. Verbal Processes are processes of 'saying' of any kind. The verbalization itself is termed 'verbiage' and the participants associated with it are 'Sayer' - the one who gives out the message, and 'Receiver' - the one to whom the message is sent (Halliday, 2004, p. 252-255). Existential Processes show that something exists or happens (Halliday, 2004, p. 256). The word used in such clauses has no identified function or meaning. The typical verbs used in these clauses are 'be', 'exist', 'arise'. The nominal group that follows these verbs is called 'Existent'.

Fig 3. Types of Halliday's processes.

In the frame of the paper, the authors would like to mention processes in Halliday's Systemic Functional Grammar (2004) in a general picture, not to specify each type of processes and call it briefly Halliday's processes.

III. COMPARISON BETWEEN CHAFE'S SEMANTIC STRUCTURE PROCESSES AND HALLIDAY'S SYSTEMIC FUNCTIONAL GRAMMARPROCESSES

The similarities between Chafe's semantic structure processes and Halliday's systemic functional grammar processes

The first similarity is that Chafe (1970) and Halliday (2004) share a view about verbs occurring in processes. In the position of Chafe

(1970), a verb can specify as a process. Likewise, Halliday's processes can be realized by verbal groups illustrated in the following samples:

(1) There were only three boats in sight now and they <u>showed very low and far inshore</u>. (Hemingway, 1952)

(2) He <u>changed</u> slightly the position of a Louis XV table. (Maugham, 1919)

(3) He would see her bending slightly over the table. (Maugham, 1919)

(4) It had snowed during the night, and he was completely buried. (London, 1903)

The verbs *showed, changed, blending* and *buried* change the condition of the nouns as defined by Chafe (1970). They are the change

of the shape of *the boats* as in (1), the shape of *her body* as in (3), the change of the position of *the table* from a place to a place or the state without movement to the state of movement as in (2) and the change from the state of appearance to that of disappearance as in (4). The nominal groups-nouns are the patients of the verbs, and 'the verbs determine what the

rest of the sentence will be like', i.e. they determine 'what the relation of these nouns to them will be, and how these nouns will be semantically specified' (Chafe, 1970, p.97).

Similarly, we can l see the elements of the processes sticked by Halliday (2004), of which the verbs refer to the processes described as in Table 2.

Table 2. Elements in Halliday's processes

Types of elements	Typically realized by
Process	(1) showed
	(2) changed
	(3) would see – blending
	(4) had snowed – was buried
Participant	(1) they (three boats)
	(2) He – the position of a Louis XV table
	(3) He – her
	(4) It – he
Circumstance adverbial group or preposisional phrase	(1) very low and far inshore
	(2) slightly
	(3) slightly over the table
	(4) during the night – completely

The second sameness can be seen when an action is its process as indicated in Chafe's concept, the process is also the material process in Halliday's view as in examples (2), (3), (4) mentioned above and in (5), (6), (7) and (8) below.

(5) <u>Strickland shut the door behind her.</u> (Maugham, 1919)

(6) <u>He sat down very slowly and painstakingly</u>. (London,1903)

(7) <u>He walked up to the table, and stood there perfectly silent</u>. (Galsworthy, 1974)

(8) <u>Buck crumpled up and went down, knocked utterly senseless</u>. (Hemingway, 1952)

(5), (6), (7) and (8) express the actions because the verbs *shut, sat down, walked up* and *stood, crumpled up* and *went down,* and *knocked* dictate that they are accompanied by the pronouns *he*, the nouns *Strickland* and *Buck* as the agents. They manifest the processes because *the door* in (5) is known to have changed its condition from 'open' to 'close' and is a patient of the verb *shut*; and *he* in (6) and (7) changes his condition from movement to immobility; and *Buck* in (8) changes his state from sensibility to unconsciousness. We can say, therefore, that the verbs in such sentences have been specified as processes.

The material processes determined by Halliday (2004) are illustrated in Table 3.

Table 3. Material processes in Halliday's concept

Participant Actor	Material Process Verbal group	Goal Nominal group	Circumstance Prepositional phrase
(2) He	changed	the position of a Louis XV table.	slightly
(3) He	would see/blending	her	over the table
(4) It the snow	had snowed/buried	him	during the night completely
(5) Strickland	Shut	the door	behind her.

Participant *Actor*	Material Process *Verbal group*	Circumstance *Prepositional phrase*
(6) <u>He</u>	<u>sat down</u>	<u>very slowly and painstakingly</u>
(7) <u>He</u>	<u>walked up / stood</u>	<u>to the table</u> <u>there perfectly silent</u>
(8) <u>Buck</u>	<u>crumpled up / went down / knocked</u>	<u>utterly senseless</u>

To sum up, there are two similar points of processes drawn by Chafe (1970) and Halliday (2004). Both authors accept verbs which keep a key role in realizing processes. The verbs make a change of nouns as patients or agents, of nominal groups as participants or as goals. Besides, when when an action is its process, the process is seen as the material process.

The differences between Chafe's semantic structure processes and Halliday's systemic functional grammar processes

Chafe (1970) inherits and develops his language approach based on structural linguistics, Transformational Generative Grammar (TGG) by Chomski but Halliday (2004) builds his theory of Systemic Functional Grammar (SFG) on the base of developing 'the context of situation' elaborating on the foundations laid by Malinowski and Firth. If TGG leans syntagmatic relations of ordering language elements, SFG tends to develop paradigmatic relations concerning which language elements can be replaced each other in a particular context and each language element is considered in the total linguistic system. As mentioned, 'Systemic theory seen as a theory of meaning as choice, whatever is chosen in one system becomes the way into a set of choices in another' (Halliday,1985, p.xiv). By the same token,it is an evidence to include that processes based on the concepts by Chafe (1970) and by Halliday (2004) reflect some differences.

First, Chafe's processes follow the structural trend, i.e. the structure of the process forms its meaning while Halliday's processes rely on meanings in context. Chafe (1970) establishes his processes based on the syntagmatic relation. In linearity, words are combined in a specific way to form meanings. The meanings cannot reach if the word order fails. It can be said that the elements in Chafe's processes can not easily change their word order as in (9), (10) and (11). Whereas, Halliday (2004) distinguishes six processes originating from the ideational meaning. Additionally, circumstances in Halliday's processes can be moved to the beginning, the middle or the end of the clause. But that in Chafe's processes can not move to any position because they are in verbal phrases referring to the entire configuration of 'verb plus patient as a unit' (Chafe, 1970, p. 103), see (12) and (13).

(9) She blushed a little. (Maugham, 1919)

(10) The smile abandoned his lips. (Maugham, 1919)

(11) She looked away and *slightly* coloured. (Maugham, 1919)

(12) The door was *partly* opened. (Galsworthy, 1974)

(13) *On the Friday* night he got drunk, so greatly was he affected. (Galsworthy,1974)

'partly' and 'On the Friday' can move to the end of the clause as in Halliday's concept but '*slightly*' cannot move to the end as in Chafe's processes. This difference occurs because Chafe (1970) tends to study the language units due towards the syntagmatic relation while Halliday (2004) lean to develop them in the paradigmatic relation.

Next, nouns realized in Chafe's processes are known as patients of verbs, so the processes can be followed by the formulas *patient + verb* and *verb + patient*. Halliday's processes reflect three components *'process-participant-circumstance'*, and the processes themselves are verbal groups while nouns or nominal groups function as participants and adverbial groups or preposisional phrases function as circumstances.

Last, Chafe's processes as defined are the change of the condition or state of patients but while Halliday's processes are particularly sorted out into six distinguishable types. Chafe (1970) does not classify processes, and the author bases on verbs to recognize the processes. Conversely, basing on meaning in context, Halliday (2004) divides processes into Material Process, Mental Process, Relational Process, Behavioral Process, Verbal Process and Existential Process described in Table.4. In addition, Halliday's Material Processes consist of actions, activities and events but Chafe (1970) distinguishes processes from actions. This is the reason why a clause can be a process in Halliday's concept but it will be a state or an action in Chafe's view, see (14), (15) and (16). More specifically, a Material process is not always a process in Chafe's view.

(14) Miss Sharp advanced in a very unconcerned manner. (Maugham, 1919)

(15) Soames then went into the box. (Galsworthy, 1974)

(16) He gave me a resentful glance. (Maugham, 1919)

(14), (15) and (16) contain the actions because the verbs have nothing to do with either a state or a change of state; on the contrary, they express an activity or action. Therefore, they

are the Material processes. We can also see the Mental process as in (17), (18) and (19), the Rational process as in (20) and (21), the Behavioural process as in (22), the Verbal process as in (23), and the Existential as in (24).

(17) I thought he was perfectly happy. (Maugham, 1919)

(18) I feel perfectly rested. (Galsworthy, 1974)

(19) This news was slightly disconcerting to me personally. (Maugham, 1919)

(20) He uttered strange sounds, and seemed very much afraid of the darkness. (London, 1903)

(21) The Sunland was very dim and distant, and such memories had no power over him. (London, 1903)

(22)   Suddenly she burst into tears, and hurried from the room.   (Maugham , 1919)

(23) "It's quite obvious that it would be much easier to nurse him here," I said, "but of course it would be very inconvenient". (Maugham , 1919)

(24) There was in my soul a perfectly genuine horror of Strick-land. (Maugham, 1919)

The followings are a detailed description of Halliday's processes (Table 4) mentioned above.

Table 4. Halliday's processes

Material Process

Actor	Process	Circumstance
(14) Miss Sharp	advanced	in a very unconcerned manner.
(15) Soam	went	then, into the box.

Actor	Process	Recipient	Goal
(16) He	give	me	a resentful glance.

Mental Process

Senser	Process	Phenomenon
(17) I	thought	he was perfectly happy.
(18) I	feel	perfectly rested.
(19) to me	was disconcerting	this news.

Rational Process

Carrier	Process	Attribute
(20) He	seemed	very much afraid of the darkness.
(21) The Sunland	was	very dim and distant,
such memories	had	no power over him.

Behavioural Process

Behaver	Process	Circumstance
(22) She	burst into tears	suddenly.

Verbal Process

ayer	Process	Receiver	Verbiage
(23) I	said		"It's quite obvious that it would be much easier to nurse him here,"
			"but of course it would be very inconvenient"

Existential Process			
	Process	Existent	Circumstance
(24)There	Was	a perfectly genuine horror of Strick-land	in my soul

Although Chafe (1970) and Halliday (2004) share some views of processes, Chafe's processes are different from Halliday's in nature. Halliday's processes follow the meaning expressed in context while Chafe (1970) bases on the structure of meaning. The former refers to the meaning, the latter bases on the structure (form).

V. CONCLUSION

In conclusion, Chafe's processes and Halliday's processes share the two basic issues. The first is that verbs play an important role in determining a process, i.e. we can realize a process through the verb involved in the process. The second is that when an action is its process as in Chafe's concept, the process will be the Material process seen in Halliday's view. Chafe's processes, however, and Halliday's processes differ from each other in some ways. The elements in Chafe's processes can not convert their order, but circumstances in Halliday's processes can move to any position in clauses. In addition, Chafe's processes are mentioned in a general picture, i.e. they exist when there is a change of state or condition of patients, but Halliday's processes are sorted out into six specific types namely Material Process, Mental Process, Relational Process, Behavioral Process, Verbal Process or Existential Process. As a result, a state or an action by Chafe (1970) can be a process in Hallday's concept.

The findings are certain to leave language learners and researchers some benefits of understanding processes, especially in setting up the backgrounds of processes. Recognizing these similarities as well as differences helps them apply the category to their uses and purposes effectively.

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