
A Shift Towards Politeness in Doctor-Patient Consultation: A Case Study in Australia

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Abstract: This paper includes a detailed analysis of a consultation between a general practitioner and his male patient in a Canberra suburb. This study illustrates the shift toward a model of patient-centeredness which is applauded in Australia. The purpose of this study is not only to reinforce the new concept of medical consultation – patient-centeredness but also to confirm the necessity of change in medical discourse and reveal the reasons that lead to the movement in doctor talk. The data was collected by note taking and recording which was later transcribed for the aim of data analyses. The researcher's role was that of the passive ethnographic researcher, playing no further role in the consultation. In other words, there was no intervention when the consultation occurred. Therefore, the information obtained from the consultation was completely natural. The theoretical framework used in this current study is Conversation Analysis (CA) and Systemic Functional Linguistics (SFL) which transcribed the discourse of doctor talk. Aspects of data analyses were followed by a bottom-up approach and conducted by both qualitative and quantitative methods. This paper concludes that the language of the doctor cannot standstill when the language of society is always changing. In other words, the doctor's language in this study has obviously been affected by the language used in Australian society. The movement towards a trend of politeness, informality and solidarity in the Australian language has entailed a shift in the language of Australian doctors.

Keywords: Doctor-Patient Consultation, Conversation Analysis (CA), Systemic Functional Linguistics (SFL), Turn-Takings, Lexico-Grammatical Characteristics

1. Introduction

The language that doctors use during their consultations with patients has become the focus of increasing interest in sociolinguistics. A large number of contributors to this field of medicine, which includes linguistics research and sociology, have explored this domain with their strikingly different opinions [29, 31, 34-36]. Traditionally, the language of the doctor has meant that doctors talked *to* their patients – the patient is the recipient of the doctor's wisdom. However, this trend is beginning to change. Doctors are now much more willing to talk *with* their patients. While 'Patient-centered medicine' has been recognized in medical practice, this power relationship involved in the doctor-patient interaction has not been widely appreciated. According to Hyden & Mishler [43], in contrast to the 'doctor talk with patient' (DTWP) model, patient-centeredness, the doctor's language in traditional consultation has defaulted to a 'doctor talk to patient' (DTPP)

model, doctor-centeredness. This model of counseling considers patients to be passive subjects who receive doctors' advice [12, 11]. However, this form of consultation has been encouraged to change as the doctor's language tends to shift to the DTWP model. Precisely, because patient-centeredness is widely encouraged in activities of the medical profession, the expression of the power of the doctor in front of the patient is absolutely not appreciated [10, 51, 6, 43, 59, 55, 7]. This article examines a face-to-face consultation between a male general practitioner and a male patient at a clinic on the outskirts of Canberra, Australia. The purpose of this study is to rely on the control of turn-takings and the grammatical characteristics of mood and modality in the doctor's interaction to explain the transition of DTWP style and the social factors that influence this shift.

The theoretical frameworks that this study accepts to use are the Conversation Analysis (CA) of Sacks, Schegloff & Jefferson [58] and Systemic Functional Linguistics (SFL) - a

world-renowned model used to describe studies of languages (see Halliday, [15, 16], Halliday & Matthiessen [22]). Within the framework of the current study, the theoretical framework of turn-taking control in CA was exploited. The method of data analysis is based on turn-takings and speech structures realized during the doctor's interaction with the patient. Furthermore, this study explores the characteristics of lexico-grammatical resources of mood and modality in the doctor-patient discourse, thereby understanding the linguistic characteristics that make up the change in the doctor's language when following the DTWP model – the patient-centeredness.

This study was divided into four main parts: (1) Introduction; (2) Introducing a theoretical background of the turn-takings in models of CA and SFL; particularly emphasizes two key analytical concepts of lexico-grammatical resources, namely mood and modality; (3) Revisiting a number of studies relevant to the current study; (4) Providing a research method, focusing on explaining the process of obtaining data and analyzing data; (5) Publishing the results and the discussions that indicate the reasons of the shift in doctor's talk; and (6) Providing general conclusions of the characteristics of turn-takings and the outstanding lexico-grammatical features that create dominant characteristics of the doctor's discourse, thereby explaining what social factors have influenced the change in the dialogue patterns of the doctor's discourse when advising the patient according to the DTWP model – the one is encouraged to be replicated in Australia.

2. Theoretical Framework

2.1. Conversation Analysis

This study cannot apply the entire research system of Conversation Analysis (CA). Thus, the theoretical framework of turn-takings in CA [58] is accepted for data analysis. The study was primarily based on turn design analysis and the structures of the doctor's turn allocations when communicating with patients. Sacks, Schegloff & Jefferson have published a study of two models known as the 'turn-constructive component' (TCC) and the 'turn-allocation component' (TAC). While the TCC indicates the units that constitute the turns such as words, phrases, clauses, or sentences, the TAC reflects the structures of the turn-takings of the parties in conversations [58].

In fact, exploiting both the TCC and TAC models in this study could show the units constitute the doctor's language while communicating with the patient. For example, based on the TCC model, researchers can understand the lexical units the doctor used when communicating with patients in consultations, thereby assessing the control level of turn-takings in the doctor's talk. In addition, the TAC model allows the researcher to decide who always plays an active role in controlling the turn-takings and how these turns are expressed in the conversation between the doctor and the patient. However, SFL research has shown that lexico-

grammatical units enable many studies to investigate deeply into the layers of words/phrases of a language's register [13, 22, 48, 38]. Therefore, although both CA's TCC and TAC models can serve the research purpose when pointing out the common conversational patterns of the doctor in the form of DTWP, this study only uses TAC to measure the frequency of turn-takings at three levels: Pairs, inserts, repairs as well as the language doctor used when communicating with patients. The study accepts SFL as the main theoretical framework to measure the lexico-grammatical units in the doctor's dialogue at the consultation.

2.2. System Functional Linguistics - Relevant Concepts to Research

Halliday and elsewhere have shown that when exploring the meaning of language, SFL views 'language as social semiotic' [13]. In terms of interrelated systems, SFL explores grammar to understand a language's numerous perspectives, rather than grammatical rules found in the language itself. In many cases, SFL linguists attempt to investigate the grammatical uses of a language to construct the linguistic components between the speaker and the listener [20]. In particular, the language interpreted based on SFL approach is developed respectively in four different strata: context, semantics, lexico-grammar, and phonology [13, 15, 16, 23-25]. Here, SFL claims that the relation between these strata is that of realization. The lower stratum realizes its next higher one. Since this study only focuses on understanding the frequency of turn-takings and the lexico-grammatical resources in the doctor's dialogue with the patient in order to indicate semantic conclusions, the phonology level is not mentioned in this study. For the above reasons, the SFL model levels are briefly presented as follows.

2.2.1. Stratification

According to Halliday [13-16] and Hasan [23-26], language, a complex semiotic system, is stratified into four different strata: context, semantics, lexico-grammar and phonology. The illustration of strata of the systemic functional model can be seen in Figure 1.

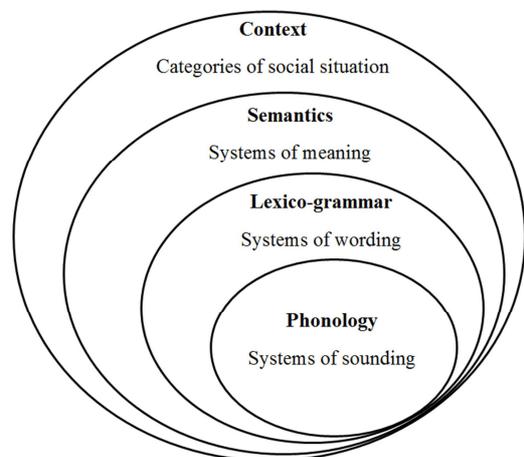


Figure 1. The four strata of SFL language system (Reproduced from Halliday & Matthiessen [22]).

As the scope of the current study is aimed at exploring lexico-grammatical resources to reflect meanings in the doctor's talk at doctor-patient consultations, phonology is not the concern of this thesis. In what follows, I will present briefly the three strata: context, semantics, and lexico-grammar to establish the framework for analysis.

At the stratum context, SFL postulates that language has three contextual categories: Field, Tenor, and Mode [20, 21]. Field, 'the nature of the social activity', refers to what is going on through language, to activities and processes that are happening at the time of speech. Tenor, 'the nature of social relations', refers to who is taking part in the dialogue, particularly to the nature of participants such as the relationship between speaker and listener and the potential for interacting. Mode, 'the nature of contact', refers to the role of language itself in a given context of a situation. In other words, Mode of language presents specific contextual situations in order to achieve the purpose of communication. The communication channels can be spoken or written language and depending on the purpose of communication to present in the form of 'rhetoric' such as persuasion, description, presentation, cause-and-effect, problem-solution, etc. It relates to characteristics such as the alignment and coherence of a text as well as how clauses are linked together to make the text as a whole. In general, categories of context in SFL - field, mode, and tenor, classified as register, are used to study communicative behavior within which all social interactions occur [16, 18].

At the stratum of semantics, SFL considers this level as a 'source of meaning' [41, 49]. Halliday categorizes the semantic stratum into three metafunctions such as ideational metafunction, interpersonal metafunction, and textual metafunction. Ideational metafunction views the grammar of a clause as representation and is realized by the systems of transitivity. Meanwhile, interpersonal metafunction considers the grammar of a clause as exchange and is realized by the systems of mood and modality. Textual metafunction, realized by the system of theme, expresses the grammar of a clause as a message. This super function is activated by the mode of the text at the language level. This metafunction highlights the correlation between language and context. In other words, it creates 'the importance between the parts that are being spoken/written in a message, between text and context (language contexts and language situations), 'throw the breath of life into the language' and gives texts senses of authenticity, alignment, and coherence' [41].

At the stratum of lexico-grammar, Halliday and other SFL scholars rank this stratum as a resource for wordings and represent language under a set of texts [16, 17, 49]. Lexico-grammar stratum helps us to understand how language is implied through its tool of wording system of lexis (vocabulary) and grammar. Precisely, at this stratum, Halliday indicates that corresponding to the three context-construing strands of meanings – ideational, interpersonal, and textual, the lexico-grammar stratum is simultaneously realized as wording through the systems of Transitivity, Mood, and Theme [16]. At this stratum, the language is

represented in the form of wording based on the grammar of the clause to reflex our experience (Transitivity), interaction (Mood), and discourse organization (Theme). In particular, the system of Mood (mood and modality) reflects participants' relations, behavior, and roles [28], is used as the main theoretical framework of the current study. In particular, the systems of Mood are used primarily to explain the interaction between the doctor and the patient through the selection of mood and modality in the clauses. According to Halliday & Hasan [19] and Halliday [14], the clause has received a special status in SFL because it is located at the intersection of three dimensions: stratification, rank, and metafunction. The relation of the clause to the overall linguistic system can be represented as follows.

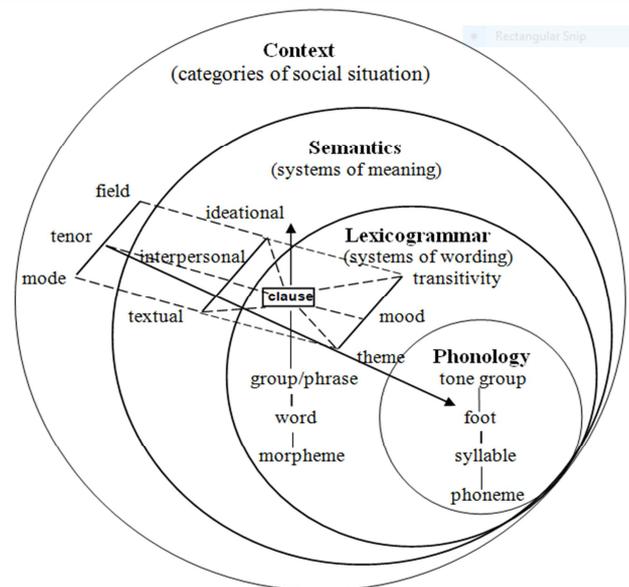


Figure 2. The location of the clause in the overall linguistic system.

(Source: Hoang [38]). Convention: = ↗ stratification, = ⇕ rank, = \ metafunction.

Hoang explains the clause can serve to express the three largely independent sets of semantic choice (representation, exchange, and message) [38, 39]. By doing this, structures under Transitivity, Mood, and Theme are also specifically reflexed. In particular, in terms of rank, the clause holds the highest position when being put into grammatical analysis. Below the clause, there will be a list of constituents, which makes up a clause such as classes of a group. Above the clause, there will be a consideration of clause complexes to see how clauses are related to each other to expand or project meanings. As mentioned earlier, the applied SFL theoretical framework in this study serves to describe the choices of lexico-grammatical patterns in the language the doctor used at the time of consultation. Moreover, the uses of the clause through the logical-semantic relationships via the two systems, Projection and Expansion are also exploited to show the grammatical metaphorical source of Mood and Modality in the doctor's linguistic patterns at the clinic consultation.

2.2.2. Mood

When lying in an English clause, the former is a component of lexico-grammar being analyzed into Mood and residue. The Mood elements of interpersonal clauses include +Subject ± Finite ^ + Predicator ^ ±Complement ^ ± Adjunct. Subject and Finite are respectively realized by nominal groups and elements of tensed or non-tensed of the verb (e.g., is, has) or modality (e.g., may, might). However, there are also many clauses when the Finite and the verb are combined into a single word (e.g., loves, gave). The two sub-components of Mood give us a clear understanding of the function of speech in communication.

Here, the Subject is an inherent element in a clause (represented by +). The Subject is regarded as the 'anchor' of the proposition or proposal. It supplies what it takes for the proposition or the proposal to be affirmed or denied or to be desirable or undesirable respectively. The success or failure of the proposition or proposal is vested in the Subject. This thesis examines how the Subject is used in propositions and proposals of doctor talks to convey interpersonal meanings. The issues of Subject mentioned in the current study are vocatives, nominal nouns, and pronouns. For example, the subject can form pairs in a certain context (the speaker/listener or the writer/reader). It is this division of roles that enables us to understand the principle of responsibility in making a proposal, where the subject is responsible for the realization of the meaning of an offer or command. Therefore, the study of the subject uses in the dialogue between the doctor and the patient gives us a clear understanding of the subject's responsibilities during the consultation.

Besides the Subject and Finite's analyses in the Mood elements is also essential because they can limit a judgment by referencing it over time and space. The Finite element, as its name implies, has the function of making the proposition finite and is something that can be argued about. According to Halliday [15, 16] and Halliday and Matthiessen [22], finite is a point of reference in the here and now. It relates the proposition to its context in the speech event. This can be done in one of two ways. One refers to the time of speaking; the other refers to the judgment of the speaker. In grammatical terms, the first reference is primary tense; the second is modality [16]. In general, finiteness is expressed through a verbal operator which is either temporal or modal in terms of polarity. This is the choice between positive and negative. Furthermore, the Mood structure is able to identify whether the speech function of a clause is a declarative mood (speaker/writer can provide hearer/reader with a message of 'yes' or 'no'), interrogative mood (speaker/writer can demand hearer/reader to supply the information) or imperative mood (speaker/writer can command hearer/reader to conduct a task) [16, 49, 38]. As each basic Mood choice carries its complexity of orienting discourse semantics, the lexico-grammatical investigation of Mood choices is divided into deployments of declarative mood, interrogative mood, and imperative mood in the doctor's linguistic patterns of communication.

2.2.3. Modality

The system of Modality lies in the system of Mood, which indicates the degree of certainty and measures the reliability of a statement about the world. In other words, modal elements are unidentified because they lie between the two polars 'yes' and 'no' - the position between positive and negative statements. Halliday states that the Modality of SFL is an interpersonal system that is realized by modalisation and modulation. As regards to modalisation, this type of modality is used to refer to the semantic category of propositions and is characterized by two degrees of interpersonal negotiation: probability (*maybe*) or usuality (*sometimes*). [17].

Furthermore, Halliday divides modality into four parameters. They are types (consisting of assessment of propositions in relation to probability or usuality and of proposals in relation to obligation or inclination), values (consisting of assessment grade in terms of high, medium, and low), orientation (consisting of responsibility for assessment in relation to objective and subjective) and manifestation (consisting of individual variation in relation to explicit and implicit).

In summary, due to the limited capacity of a scientific paper, this study based on the theoretical framework of CA and SFL and carefully selected the theoretical structures that were directly related to the data analysis of the language the doctor used at the time of the consultation with the patient in an Australian suburb. The paper will take a bottom-up approach to analyze turn-takings (applied in CA) and the frequent uses of lexico-grammatical choices (mood and modality) (applied in SFL) to conclude, explain the change and reasons for changes in the doctor's speech under a patient-centered DTWP model.

3. Relevant Studies

A number of research on the language doctors use at the time of consultation with patients have used CA and SFL as their major approaches. This paper, in turn, presents the research studies using methods and designs that are the most similar to the author's current research.

3.1. Conversation Analysis Research

Early studies of doctor talk at the consulting clinic using the CA theoretical framework were the works of Frankel [12], Heath [29-31]. This was followed by studies of Bowles [5], Candlin [8], Jack & Tanya's turn-repairs [44], Mishler's turn-Anita questions [4], Heritage's question-and-answer [33], Raymond [56], and Adam's power relations [1]. These studies share the same research purpose of evaluating how doctors and patients can use their turn-taking, who takes more turns, who often interrupts turns [44, 50] and adjusts words in each turn, and who asks more questions in turns [4, 1].

3.2. Systemic Functional Linguistics Research

In fact, similar studies to the scope of this research that

uses the SFL theoretical framework are published not only in English but also in a lot of different languages [42, 46, 47, 54]. The goal is to compare the similarities or differences in register among doctors from different regions and languages. These studies rely on the lexico-grammatical choices that are realized in the doctor's language to make a general assessment of the functional semantics hidden behind the speech. A typical finding in Adegbite & Odeunmi's study that depended on the selection of process types of verbs in the consultation has shown that the polite strategies expressed by the doctor are very diverse [2]. It is these strategies that make the interaction between doctors and patients very effective although the DTTP model attached in the dialogue showed that the doctor often controlled the topics and the patient was the informant in the examinations. Adam's research also shows that the power of doctors is shown to be very 'subtle' when the doctor uses a declarative mood that is accompanied by modalities during the negotiation with a patient about treatment [1]. Adam's findings are similar to Montgomery's when the author claimed that modalities are able to reduce power and enhance politeness in communication and negotiation, helping patients to be more involved in the communication process [27, 52]. In Nguyen's study on the doctor's power relationship with the patient in a dialogue obtained from YouTube, the author gave signs of power that are 'disguised' in the doctor's polite strategy when negotiating with the patient [53]. The author found out that the doctor exploited no negative form in imperative clauses. Moreover, the explicit subjectivity in the style of declarative mood (e.g., *I think you should*, etc.) is also exploited many times. Similarly, implicit subjectivity is used in large quantities accompanied by modal verbs (*you can/should*) shows that the doctor wants to shift the responsibility of the consultation to the patient and encourages the patient to be more active in negotiating the treatment plan.

The above studies have contributed greatly to the understanding of the language doctors use when performing consultation. This study aims to explore how turn-takings and lexico-grammatical choices can shape a change in the doctor's communication language under the DTWP method. Moreover, the author also wants to draw sociological conclusions about whether the doctor's language is affected by the consultation language in Australia that highly appreciates the patient-centered style.

4. Scope of Data Collection, Data Collection Procedures, and Aspects of Data Analysis

4.1. Scope of Data Collection

The data were taken directly from a periodical consultation between a general practitioner and a patient. The patient has a history of chronic knee joints and must be injected every three months. In the middle of each treatment procedure, the

patient often shows signs of heart palpitations and nausea. The 15-minute audio was recorded in a clinic room on the outskirts of Canberra, Australia. Both the doctor and the patient are men, at the same age of over 40. The general practitioner has been practicing consulting for nearly 20 years. The patient is one of the author's classmates at a TESOL master class.

4.2. Data Collection Procedure

To ensure the accuracy and validity of the study, before starting the recording, the researcher clearly stated that the purpose of the dialogue should take place naturally and must ensure the length as well as the consultation process (opening, advising, and ending) as a normal consultation examination. After having obtained permission from both the patient and the doctor to make a recording in the clinic room, the researcher's role was that of the passive ethnographic researcher, playing no further role in the consultation. The researcher only sat down to record and take note of the doctor's facial expression, attitudes as well as body language to complement the discussion of the study. The data was then re-transcribed based on transcription symbols according to the research done by Eggins and Slade [9]. However, the author removed unnecessary transcription symbols and used only some of the symbols for the research such as punctuation marks, non-transcriptional symbols, or overlapping turns. Grammatical transcription symbols were based on the symbols used in Hoang's study [37]. The data were then computerized to realize frequencies of the turn-takings as well as the lexico-grammatical choices in the language used by the doctor and the patient at consultation.

4.3. Aspect of Data Analysis

To find out the doctor's language shift when following the DTWP model in Australia, this study followed a bottom-up approach and conducted both qualitative and quantitative analyses as follows:

1. Making a general quantitative analysis to have the basic data and draw general conclusions as well as lay the foundation for subsequent analytical steps;
2. Analyzing the percentages and characteristics of turn-takings (pairs, inserts, repairs), speech functions, and responses in dialogue;
3. Analyzing the percentages and characteristics of clauses simplexes, clauses complexes, and clause nexuses at the time of consultation.
4. Analyzing the percentages and characteristics of vocabulary and grammar through the choice of mood (declaratives, interrogatives, and imperatives) and modality (types, values, orientation, and manifestation).

5. Findings and Discussion

5.1. General Quantitative Analysis

The general quantitative analysis presents statistics from the data and makes comparisons of the selected criteria

between the talks of the doctor and the patient. The analytical process was manipulated by two basic steps. Firstly, the comparison units were encoded in the word version (clause simplex boundary is indicated by double vertical slash ||; clause complex boundary are triple vertical slash |||; insert is characterized as =); raising voice is noted by an upward arrow ↑). Secondly, by the simple operation of 'Ctrl + F' in the Microsoft Word program, the frequencies of the comparison unit were calculated. The general quantitative analysis is illustrated in Table 1 below.

Table 1. General quantitative data.

General quantitative	Doctor	Patient	Total
Number of words	719	233	952
Clause simplexes	157	63	220
Clause complexes	32	9	41
Pairs	19	18	37
Inserts	5	2	7
repairs	6	0	7

The general quantitative statistics show that the volume of words has a total of 952 words, of which the number of words spoken by the doctor accounts for two-thirds of the total volume of words in the dialogue. The total number of

the clause simplexes of the corpus is 220 clauses including 41 clause complexes, of which the doctor owns 3 times more than that of the patient. The total number of pairs is 37, of which the number of inserts is 7 and the repairs are 6. The turns are equally located in the communication pairs, following the model of the doctor asking and the patient answering.

5.2. Analysis of Turn-Takings, Speech Functions and Responses

In this section, analyses of turn-takings of CA's theoretical framework combined with an analysis of speech function and responses are presented. According to Halliday [17], 'initiating' is allocated according to good-&-services and information will, in turn, be articulated with a set of responses of 'expected responses' such as 'acceptance', 'implementation', 'recognition', 'response' and 'discretionary alternative' such as 'deny', 'rejection', 'refutation'. The combination of turn-taking analysis, speech function, and responses will reflect the discourse in the doctor-patient pairs of dialogue with consultation styles of DTWP or DTP. Table 2 indicates the percentages of turn controlling (pairs, inserts, repairs) and speech function.

Table 2. Frequencies and percentages of turn-takings and speech function.

Speech function	Doctor			Patient		
	Participating pairs	Insert	Repair	Participating pairs	Insert	Repair
giving good-&-services	11 (57.9%)	0	0	2 (11.1%)	0	0
giving information	8 (42.1%)	7	0	16 (88.9%)	2	0
Total	19 (100%)	7 (100%)	0 (0%)	18 (100%)	2 (100%)	0 (0%)

Table 2 shows that the frequency of participating pairs between the doctor and the patient is similar. The doctor only recorded only one time more than the patient. However, the percentage distribution in speech function showed a difference between the two participants. While the majority of doctors' speech was involved in goods-&-services (57.9%), that of the patient's represented the need for information, accounting for a very large percentage of 88.9%. Most of the 'insert' process was done by the doctor, and no 'repair' process occurred. In studies of doctor-patient communication, many authors have found common evidence that proves doctors often use turns with questions [33, 56], and engage in inserting and repairing activities more than patients [50]. This study also found coincidences with previous studies, however, all 'inserts' belonged to the giving information category. The dialogue in example (1) demonstrates the interference in the information exchange service between the doctor and the patient.

(1) Doctor: *Which is ... which is a little weird but it's good from...*

Patient: = *Yeah, I mean like when should I be worried...*

Doctor: = *I think you know the time to worried ... be if you had a lot of shortness of breath. If you had any chest pain you haven't had any passing out episodes...*

No use of 'inserts' in the exchange of 'goods-&-services'

in the doctor's consultation proves that when persuading or presenting views and ideas, the doctor is very good at listening to the patient. However, when the patient has difficulties in sorting information to explain, the doctor is willing to share experiences and provide timely advice. Analyses of turn-takings and inserting in this study partly show the doctor's DTWP-oriented counseling strategy.

5.3. Analysis of Clause Simplex, Clause Complex, and Clause Nexus

5.3.1. Comparison of Clause Simplex and Clause Complex

The first step of the clause analyses is to compare clause simplexes and complexes. Table 3 indicates the frequency percentages of the two compared clauses in the dialogue between the doctor and the patient.

Table 3 shows that both doctor and patient use clause simplexes more than clause complexes even though the use of clause complexes in the doctor's talk is three times greater than that of the patient. The total number of clauses used by the doctor is 189, of which the number of clause simplexes is 157, accounting for 83% and the clause complexes are 32, accounting for 17%. Meanwhile, the total number of clauses used by the patient is 72, the clause simplexes account for 87.5%, with 63 instances, seven times higher than the clause complexes.

Table 3. Clause simplex and complex found in the doctor-patient consultation.

Percentage	Doctor			Patient		
	Clause simplex	Clause complex	Total clause	Clause simplex	Clause complex	Total clause
TOTAL	157	32	189	63	9	72
%	83	17	100	87.5	12.5	100

Comparing the use of clause simplexes and complexes shows strategies in the communication of the doctor and the patient. The doctor, to some extent, uses a certain number of clause simplexes when he wants to ask concise questions that make the patient easily understandable. In addition, the doctor uses clause complexes to expand sentences when he wants to explain or convince the patient to follow the course of treatment. Although, like the doctor, the patient uses many clause simplexes which are usually minor clauses such as 'yes', 'no', 'ok', 'sure', etc.) in responses to the doctor's consultation. The frequency of use of the clause complexes of the patient is not high but the number of uses is able to describe the level of compliance with the doctor's treatment.

5.3.2. Analysis of Clause Nexus

The second step of clause analyses includes (i) types of interdependency or TAXIS and (ii) logico-semantic relation. Different types of degrees of interdependency (i) are the meaning of relational structures through which one component complements the other, not a single relationship that can be obtained from components of the clause complexes. Two technical terms for degrees of interdependency are known as Hypotaxis (equal status) and Parataxis (unequal status). The former 'is the relation between a dependent element and its dominant, the element

on which it is dependent [22]. On the contrary, the latter is the relation between two identical components, one starting and the other continuing. Meanwhile, logico-semantic relation (ii) consists of a wide range of different logical-semantic relations and any of which has its own value of major and minor components in a clause nexus. This relationship consists of two basic relationships, projection, and expansion. The former is simply the secondary clause that is projected through the primary clause to re-pronounce a certain locution or idea [40]. Meanwhile, the expansion relies on three subtypes namely 'elaboration' – symbolized by =, extension – symbolized by + and enhancement – symbolized by x) (also see [16, 49, 38]).

Analyses of the clause nexus allow a deeper understanding of different types of relations in the clause that the doctor uses. Although the rate of using clause complexes compared with that of clause simplexes is not high in the doctor's talk. However, since this study only focuses on the doctor's dialogue, realization of when and what kind of logico-semantic relations in the doctor's complex clauses plays an important role in interpreting the doctor's consultation strategy under the DTWP model. Percentage results of sub-categories in the types of logico-semantic relations are presented in Table 4.

Table 4. Doctor's frequent use of TAXIS and Logico-semantic relations in clause complexes.

(i) & (ii)	TAXIS (i)		Logico-semantic relations (ii)				
	Para	Hypo	Expansion			Projection	
Type			Elaboration	Extension	Enhancement	Idea	Locution
No of frequency	64	89	16	56	33	0	2
Total	153		107				
%	41.8	58.2	14.9	52.4	30.8	0	1.9

The figures show that the doctor used both types of relationship between clauses, however, the percentage in a degree of interdependency accounts for nearly more than one-third. Meanwhile, the extension subtype in logico-semantic relations reaches the highest, contrasting to the subtype Idea of projections that records no case. The flexible uses of TAXIS and logico-semantic relationship demonstrate that when selectively using words to make the patient easily understand, the doctor often uses conjunctions that connect words in the parataxis clauses such as 'so', 'but', 'and' or the relative components in hypotaxis clauses such as 'as', 'because', 'which', 'when'. It can be said that the type of paratactic relation or hypotactic relation carries a different meaning in the speech of the doctor. When the doctor wants to make a brief or summarize the steps in the treatment process, the clause complexes are usually found as parataxis. This strategy aims to help the patient understand the problem more concisely and more succinctly.

(2) ||I think ||you are doing great so just ... ||you know to
 1.1 x 1.2 x 1.3
 keep making those lifestyle changes, ||increasing your
 x 1.4
 exercise.

(3)...||you know ||if you'd like ||I can see you back in a
 1.1 x 1.2 x 1.3
 year just those kinds of checks on things ||and you know feel
 x 2
 more than welcome to call my office.

Meanwhile, dependent clauses, which are used to provide more information to patients during counseling, are used mainly by the doctor to expand opinions, explain or persuade patients to follow their advice.

(4) ||I'd like you to go to the ER ||if you have any ... any
 1 α x1β
 symptoms like that.

In semantic relations, the Extending clause takes up a large number. Similarly, there is an equivalent percentage of two

types Elaboration and Enhancement. The Extending style is characterized by the use of the conjunction ‘and’ in order to list, expand, and sometimes express similar opinions. Of the 56 instances of Extending style, there are 17 times the doctor uses ‘and’.

(5) ||Well, ||he comes to the boy’s hockey ||and his son
 1.1 +1.2
 plays in the under eight ||and I had a chat with him.
 +1.3

Although the Enhancement of the Expansion type accounts for only 30.8% of the Logico-semantic relations, the frequency of using the word ‘so’ that refers to causes and effects reaches nearly half of the enhancement clauses the doctor used.

(6) ||We allow a body mass index of up to above 32, ||so
 1.1 x 1.2
 you’re overweight.

(7) ||I think ||you are doing great so just ... ||you know to
 1.1 x 1.2 x 1.3
 keep making those lifestyle changes, ||increasing your
 exercise. x 1.4

Of the total clause complexes used by the doctor, only two projection clauses belong to the Locution style. These clauses are used when the doctor wants to base on a certain message to confirm the value of his advice. The frequency of the projection style in this study is usually not high because this is a face-to-face consultation. Here, the doctor uses more

direct speaking actions than indirect ones.

(8) ||So, we’ll just keep working on that. Luckily, ||you
 1 +2
 know ||I know ||you said ||your grandmother had (.) ||but
 + 3α x 3β x 3γ + 4.1
 you know ||your holter monitor is completely normal.
 x 4.2

(9) ||Well, ||yeah. ||Like I said, ||you know from a cardiac
 1.1 x 1.2
 standpoint.

5.3.3. Analysis of Mood

The analyses of Mood are based on the frequency or percentage of use of Mood in the doctor’s dialogue. The entire analysis will follow the studies of Halliday [16, 17].

According to Halliday, the analysis of mood is based primarily on the major or minor clauses of affirmative or negative meanings [16]. In this study, imperative and interrogative clauses are analyzed in terms of two types of major and minor clauses. The affirmative/negative forms of major clauses include the components of Mood and polarity (see section 2.2.3). Sometimes the components of Mood are simplified (e.g., Yes/No, I have/haven’t). Minor clauses do not select for Mood and function the same as a component (e.g., OK, Well, Right, Uhm, Mmm). The details of the Mood analyses are indicated in Table 5 below.

Table 5. Number and frequency of use of mood by the participants (n=205; 100%).

Doctor	Patient				Patient	Patient			
	Major		Minor			Major		Minor	
	pos.	neg.	pos.	neg.		pos.	neg.	pos.	neg.
Declarative	128 (77.1%)	13 (7.8%)	9	0	Declarative	32 (53.3%)	3 (5%)	19 (31.6%)	2 (3.3%)
Interrogative	12 (8.3%)	0	0	0	Interrogative	4 (6.6%)	0	0	0
Imperative	4 (2.7%)	0	0	0	Imperative	0	0	0	0
Total 166 (%)	144 (86.7%)	13 (7.8%)	9 (5.5%)	0 (0%)	Total 166 (%)	36 (60%)	3 (5%)	19 (31.7%)	2 (3.3%)

In general, both major and minor declarative clauses are used at a high percentage by the doctor and the patient. Although the interrogative clauses are less exploited, it ranks the second position. In particular, the imperative clauses are rarely used by the doctor, accounting for a very small percentage (2.7%).

It is worth noting that while the percentage of major declarative clauses is claimed to be used most by the doctor (77.1%), minor declarative clauses used by the patient are much more frequent than the doctor (19% vs. 13%). The interrogative clauses the doctor uses are three times higher than that of the patient and there is no negative form of the interrogative clauses in this current data corpus.

The diverse proportions from the perspective of Mood analyses can be explained as follows. Firstly, the declarative clauses used by the doctor are at a high frequency because the doctor is responsible for providing and explaining information to the patient during the visit. This conclusion is also quite correlated with the conclusion in the clause nexus analyses (see section 5.3.2). The doctor uses declarative clauses to explain and convince the patient to follow his

advice. Example 10 below illustrates the purpose of the declarative clauses in the doctor’s dialogue.

(10) ||So, you are 100 kg at the moment... ||look at your
 body mass index ||when you were 109 kg ||and was 33.6
 ||which is fat. Obese range ... ||No, ||you are only overweight.
 ||So, in that regard ||you’ve improved, ||but will make you
 overweight. ||Well ||obese and fat is the same thing really,
 perhaps. ... weight. ||So, now you’re 30.5 ||but the obese
 range is really 30 up ||and overweight is 25, 30 ... ||but you’re
 pretty solid in terms of the frame. ||So, ||if we allow a body
 mass index of up to above 32 ||so you’re overweight. ||If we
 can get to 27 that should be brilliant.

The doctor’s usage of many major declarative clauses and the patient’s minor declarative clauses (e.g., well, ok, right, yes) shows a quite high interaction in consultation when the doctor receives approvals from the patient. Although the percentage of the doctor’s usage of minor clauses is not high, the different choice of these clauses represents different meaning (e.g., great, right, fine, uhm, huh). Here, the doctor aims to encourage the patient to continue describing or participating in the consultation. Therefore, the doctor uses

minor clauses to encourage the patient to get involved in expressing their feelings, attitudes, and openness in the conversation.

Second, interrogative clauses were mainly used when the doctor wanted to exploit the information from the patient. However, the doctor also used different types of questions with different communication items. For example, when the doctor wants to extract information from the patient, the doctor uses wh-questions.

(11) *How much exercise are you getting?*

(12) *What about socially? what are you up to?*

When the doctor seeks quick information, he uses polar questions.

(13) *Do you have any questions for me?*

(14) *Can I see your pulse?*

Often when a polarizing question – yes/no is used, the speaker/writer wishes to seek to agree/disagree responses from the listener/reader. This type of question usually limits presenting a yes or no response. Therefore, this form of communication will limit the interpersonal meanings in communication because the answer is limited to agreement/disagreement. However, the data has shown that among the low number of interrogative clauses, the Yes/No questions are seen only in the two above examples (13&14). In this study, although yes/no questions accounted for a negligible percentage, they all fell into the group of clearly expected answers such as ‘of course’ and ‘yeah’ from the patient.

In addition, this study also found that the doctor also used declarative clauses, accompanied by minor clauses such as ‘ok’ and ‘alright’ with a high-pitched tone at the end of the sentence to call for an agreement or confirmation from the patient.

(15) *So, if you pass out those are things that ... that would be more worrisome. I'd like you to go to the ER if you have any ...any symptoms like that. OK?*

The use of minor declarative clauses such as ‘ok’ and ‘alright’ not only helps the doctor wait for approvals from the patient but also helps the doctor offer the patient to have turn-takings and express ideas.

Third, although the imperative clauses are used at the lowest rate (2.7%) in the doctor’s speech, their functions are quite effective during the consultation. Cases of the

imperative clauses were the following uses: (i) the doctor asks the patient to perform simple manipulations that the doctor can perform a clinical examination. (e.g., ‘deep breath a little!’); (ii) The doctor does not want to have open negotiations with the patient when he wants the patient to have a strict follow-up procedure. Moreover, in cases of using the imperative clauses, the doctor always combines the use of modal verbs such as ‘should’ and ‘need’. Thus, this combination enables the doctor to increase his politeness and mitigate his power and pressure on the patient.

(16) *So, that's just from your place around. We all should be slim, you know, you know. Everybody should be slim. Slim ... slim ... but of course genetic. Be more socially! You should keep moving!*

In the cases of using the imperative clauses, the doctor did not use them as a form of a command. On the contrary, these clauses were intertwined with the declarative clauses, or minor interrogative clauses (e.g., ‘ok?’, ‘alright?’) in order to lighten the commanding in requests.

(17) *These parts are out on the regular rate and rather than right now. Take a listen to your lungs! Deep breath! Ok? As long as they're clear to auscultation by that early.*

In the case of consultation visits, it is common for doctors to take an active role during the consultation because they act as representatives who implement medical tasks and are responsible for patients’ health. Therefore, doctors often show their dominant power over patients. However, this study shows a consultation style of patient-centeredness or DTWP examination model which allows the doctor expresses his power in a different way. The analyses of Mood show that the imperative clauses are used by the doctor as guidance, and advice, not a request or command.

5.3.4. Analysis of Modality

According to Halliday, under the system of Mood, the modal verbs can be arranged and divided into subsections of mood adjuncts such as ‘polarity’, ‘modality’, ‘temporality’, and ‘mood’. Due to the scope of the study, only four types are arranged into the two basic meanings of modality: Modalisation which shows judgments, and Modulation which makes the proposal [16]. First of all, detailed analyses of the four modality types are illustrated in Table 6.

Table 6. Number and frequency use of modality types and values by the participants.

Types		Doctor			Patient				
		H	M	L	Total	H	M	L	Total
Modalisation (information)	Probability		7	10	17 (21%)	0	3	0	3
	Usuality	6	5	1	12 (14.8%)	0	0	0	0
Modulation (goods & service)	Obligation (unmodulated)	2	4	1	7 (8.7%)	0	0	0	0
	Inclination (modulated)	6	11	24	41 (50.5%)	0	1	0	1
Total: 81 (100%)		14 (17.2%)	27 (33.3%)	36 (44.5%)	77 (95%)	0	4 (5%)	0	4 (5%)

* H: High; M: Medium; L: Low

Table 6 indicates the total percentage of modal operators associated with modality types used by the participants. It can be seen that the doctor dominantly uses modality (95%)

more than the patient (5%). The use of modal operators in the doctor’s language is scattered across all types. Especially, the type of *Modulation* (goods-&-services) accounts for an

almost double percentage of Modalisation (information). Notably, modality of *Probability will/may/might, Inclination will/need/will/would/should/can* are used more than the other two types of *Usuality* such as *always/usually/sometimes* and *have to*. In particular, *Inclination* is used at a very high percentage, accounting for 50.5% of the modality types the doctor used. In addition, the modality value in the doctor’s speech is found mostly in the lowest category, only 14% belongs to the high group such as *always/have to/need/needn’t*. This proves that the doctor aims to use a patient-centered strategy when he wants to focus on explaining, persuading, and talking to the patient more than providing information. Clauses of ‘goods-&-services’ are often associated with modal operators – a tool that helps create the patient’s belief when listening to the doctor’s explanation and persuasion. If these modal operators are not used, the doctor’s voice will be more direct, cannot be shifted flexibly, and obviously, it will be more difficult to convince the patient to agree and be satisfied with the information or advice from the doctor.

(18) *||We all should be slim, you know, you know.*

Although being used at a smaller percentage, modal operators in the *Modalisation* that involve providing information also occupy a very important place in the doctor’s speech when giving the patient a clear understanding of his health condition.

(19) *||So, in that regard you’ve improved ||but that will make you overweight.*

(20) *||So, if you pass out those are things that ... ||that would be more worrisome. ||I’d like you to go to the ER ||if you have any ...any symptoms like that.*

It can be said that the two modal operators ‘will’ and ‘would’, belong to the probability category, have served to provide information with different purposes (examples 19 and 20). In example 19, the modal operator ‘will’ is used as an affirmation in the statement of the doctor’s judgment and prediction. Meanwhile, in example 20 ‘would’ is used to alleviate the anxiety of the patient in the doctor’s warning.

The modal operators of *Inclination* at the low value such as ‘need’, ‘will’, ‘should’, ‘can’, and ‘may’ are used more than that of the *Obligation* and play an important role in persuading the patient to follow the doctor’s counseling. The modal operators of *Obligation* allow the doctor not only performs his responsibilities easily but also to avoid direct imperative.

(21) *||I don’t think ||we need to start with any medications.*

(22) *||If we can get to 27 ||that should be brilliant.*

Halliday argues that of the four types of modalities, modality orientation is the basic distinction that is used to determine how each modality’s meaning gets expressed [16]. Meanwhile, the modality manifestation indicates implicit and explicit variants to the subjective and objective orientation of modality. Halliday (Ibid.) explains that from the perspective of explicit evaluation, subjective explicit is realized by ‘sensor’ – *I + mental processes* such as *think, wish, understand* (e.g., *I think/wish/understand*); Explicitly objective type, realized by intensive attribute relational

clause such as *It is likely...; This is....* Meanwhile, the implicit assessment does not represent the speaker/writer’s judgments. Rather, it enacts the listener/reader’s interaction such as giving opinions and agreements. the silent assessment does not represent the responsibility of the speaker/writer but gives it to the listener/reader during the interaction. Subjective implicit is realized by finite modal operators such as *may, will, should* (e.g., *you may/will/should*); Objective implicit is marked with comment adjuncts such as *really, luckily, completely, likely especially, typically*.

When analyzing the combination of *Modality Orientation* and *Manifestation*, this study specifies the doctor’s patient-centered approach. Table 7 presents the distribution of subjectivity and objectivity of explicit/implicit orientation by the doctor during the interaction.

Table 7. *Modality Orientation and Manifestation used by the doctor.*

Manifestation	Orientation	Frequency	Percentage
Subjective: explicit		7	12.3%
Subjective: implicit		35	61.4%
Objective: explicit		2	3.5%
Objective: implicit		13	22.8%
Total		57	100%

Table 7 shows that of the 57 modal clauses, most of them are skewed towards subjectivity (accounting for more than 70%). In contrast, explicitly objective assessment ranked at the lowest rate, reaching only 3.5%.

The implicitly subjective assessment used by the doctor is aimed at encouraging the patient to be more active in the treatment process. The type of modality experienced the highest percentage and is realized with the subjective operator referring to the patient – ‘you’ + *modal operators* such as *can, may, and should*.

(23) *||And you know ||as long as you can do anything else come up. ||I will see you back here.*

The doctor’s use of many implicitly subjective assessments has shown that strategies of the patient-centered consultation were activated effectively when the doctor attempted to get the patient involved much more in the conversation and to improve the patient’s autonomy. In this way, the patient is not passive, he actively contributes opinions during treatment.

However, to do his duties well, the doctor also used explicitly subjective assessments with the typical structure *I know /think/understand* to emphasize his opinions or advice and to express his feelings to the patient.

(24) *|| So, I think ... ||you know everything ||looks normal from a cardiology standpoint.*

The reasonable combination rate in the use of implicitly and explicitly subjective assessments has shown that when the doctor wants to shift responsibility and improve the patient’s autonomy, he uses implicitly subjective assessments. Besides, when the doctor wishes to emphasize his points of view, the doctor switches to using explicitly subjective comments to share experiences and to create more trust for the patient. In this way, the doctor did not put

pressure on the patient, but instead, promoted the patient's independence and autonomy and provided the patient with a cooperative atmosphere during the consultation.

A low percentage of explicitly objective assessments indicates that the doctor was more confident with his judgments than relying on feedback or experience. This is easily understandable because the doctor has more than 20 years of consulting experience; Therefore, the doctor's knowledge and practical experience are able to bring about efficiency and create the patient's belief.

Implicitly objective assessments ranked at the second-highest percentage of this study. They were realized by the Mood adjuncts (e.g., *really*, *luckily*, *completely*, *likely*). According to Halliday and Matthiessen, this type of assessment is able to describe the attitude of the speaker/writer in speech function [22]. This study shows that the implicitly objective assessments, realized in declarative clauses are able to help the doctor share views and treatment plans in front of the patient and minimize the imperative tones.

(25) *|||Luckily, ||you know |||I know ||you said ||your grandmother had (...)|||but you know ||your Holter monitor is completely normal.*

The distribution rate of explicit and implicit assessments of subjectivity and objectivity shows that the doctor has adopted a patient-centered strategy with signs of shifting responsibility and autonomy to the patient. In addition, to do his tasks well, the doctor shares knowledge, experiences, and perspectives before the patient to create an interactive atmosphere during the communication process with the patient.

6. Conclusion

This study is based on CA's theoretical framework to examine turn-takings and on SFL's theory to investigate grammatical characteristics of Mood (mood and modality). Then, the study relies on the data analyses to demonstrate the signs of language shifting in physician consultation under the DTWP consultation model which has been replicated in Australia. Aitchison has explained that 'language, like everything else, is joining in the general flux' [3]. This means that language never 'stands still', on the contrary, language is always moving [32]. Moreover, when emphasizing the language trend toward the 'informality' in Australia, Jones wrote: 'A vast number of societies have been undergoing an inexorable movement towards informality in the use of language: it is part of the 'ever-whirling wheel' of linguistic evolution that some deplore as a form of decadence and others accept as being inevitable and natural.' [30, 45] Nonetheless, there are many ways to show the evidence of a change in discourse in medical advice; however, because of the space limitations of a scientific paper, this study only focuses on giving evidence of turn-takings and some lexico-grammatical characteristics that have formed the method of DTWP consultation. From the evidence

analyses of patient-centered consultation patterns in the doctor's speech, this article includes some of the following conclusions:

Firstly, the linguistic patterns the doctor used when communicating with the patient have demonstrated the shift of discourse toward DTWP style in medical consultation. Specifically, the analyses of turn-takings and the lexico-grammatical characteristics of Mood and Modality show that the doctor effectively exploited the grammatical resources in his language. Here, the doctor's aim is to improve the patient's autonomy and to exercise his power over the patient in a polite way. In other words, to fulfill his responsibilities, the doctor's power is hidden behind his discourse in a subtle mode that can create a close and friendly atmosphere.

Secondly, grammatical resources can make a great contribution to improving the quality of doctors' speech when communicating with patients, especially the effective control of turns, clause complexes, subjectivity, or modality.

Third, the doctor's language cannot 'stand still' when it is in a linguistic system of the society to which it belongs. Obviously, the doctor's language in the current study is directly influenced by the Australian language system that always moves toward the trend of intimacy and friendliness [45].

Although this study only examines the narrow scope of turn-takings of CA, the use of Mood and Modality within the theoretical framework of the SFL, is an affirmation of the effectiveness and humanity value of the patient-centered form of medical examination and treatment – DTWP. The present study is also a call for a change in a doctor's discourse that should be shifted to a polite and friendlier mode. Particularly, Roter & Hall state that doctors should consider patients as 'experts' because while doctors solely rely on 'medical data', patients own a better overview of their physical and mental health [57]. Hopefully, this paper not only contributes greatly to individuals, and research departments of language but also to a valuable source of reference materials for medical students who want to practice medical ethics, and communication methods with patients efficiently.

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