

The Metalinguistic Function of 'Silence' in a Diagnosis Context: Rethinking Doctor-Patient Interaction in Japan

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Abstract: Recently in Japan, there have been discussions about the significance of "patient-centered medicine" and "narrative based medicine", but few linguistic studies have been conducted. The purpose of this study is as follows: (1) to reconsider the surface evidence related to the linguistic concepts of "cohesion" (Halliday & Hasan 1976), "frame" (Goffman 1974, 1981; Tannen 1993; Tannen & Wallat 1993), and "contextualization cues" (Gumperz 1982) in the diagnosis context, and (2) to clarify the underlying metalinguistic function of "silence" through interview narratives with medical doctors. Of 78 medical interviews between doctor-patient interaction audiotaped (N=78) in one hospital and two clinics in Tokyo and Osaka, we chose one 13-minute interaction between a female patient in her seventies with a paralyzed hand due to cerebral strokes and her male doctor of internal medicine in a hospital in Osaka. The long "silence" interruption in the communication signals a "contextualization cue" which stops the patient's statement and changes her topic. According to textual and interactional discourse analysis, "breaking cohesion" potentially represents the breaking of bonds between doctor and patient. In order to analyze how "silence" possesses metalinguistic functions in diagnostic contexts, three medical doctors were asked for their interpretations of the same audiotaped interview data based on the research interviewing method. Differences in interpretation of "silence" and its "non-verbal communication" were conspicuous even among the medical doctors in terms of (1) the doctor's way of communication and (2) the significance of the doctor's medical examinations. In order to understand the multi-faceted significance of silence, especially in situations where the surface linguistic evidence is not clear, we must carefully consider contextualization cues.

1 Introduction

Japan has the fastest rate of population aging and the highest life expectancy at birth (Ozawa & Nakayama 2008) among all industrialized countries. Recently in Japan, there have been discussions about the significance of "patient-centered medicine" (Stewart et al. 2014) and "narrative based medicine", i.e., "NBM" (Greenhalgh & Hurwitz 1998), but few linguistic studies have been conducted. Although medical communication studies using quantitative methods have grown markedly even in Japan over the past decade, there have

been few qualitative studies of doctor-patient communication.

The purpose of this study is as follows: (1) to reconsider the surface evidence related to the linguistic concepts of "cohesion" (Halliday & Hasan 1976), "frame" (Goffman 1974, 1981; Tannen 1993; Tannen & Wallat 1993), and "contextualization cues" (Gumperz 1982) in the diagnosis context, and (2) to clarify the underlying metalinguistic function of "silence" through interview narratives with medical doctors.

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2. Data

Doctor-patient visits were audiotaped (N=78) in one hospital and two clinics in Tokyo and Osaka. The average age of the patients was 83.4 (SD=11.8), and 31 patients (40.0%) were male. The characteristics of the patients and the consultations are shown in Table 1.

Of 78 interviews, we chose one 13-minute

interaction between a female patient in her seventies with a paralyzed hand due to cerebral strokes and her male doctor of internal medicine in a hospital in Osaka. The time of this conversation is relatively long compared to the overall mean length of the consultations in our data set (6.7 min. (SD=4.4), 5.2 min. (SD=4.2) in Tokyo and 3.5 (SD=2.5) in Osaka). See Table 1.

Table 1. Characteristics of patients and consultations

Variables	N (%)	Tokyo	Osaka
Patient characteristics			
Gender			
Male	31 (40.0%)	13	18
Female	47 (60.0%)	28	19
Mean age (years)	63.4 (SD=11.8)	65.7 (SD=11.6)	60.8 (SD=11.59)
Consultation characteristics			
Mean length of consultation (min)	5.2 (SD=4.2)	3.5** (SD=2.5)	6.7** (SD=4.4)
			**p<0.01

3. Quantitative Analysis

For your reference, a quick overview of the quantitative characteristics of this interaction is shown by using the "Roter Interaction Analysis System" (RIAS) (Roter & Hall 2006), which is widely used in the US and Europe and has more than 200 previous studies conducted in the world. RIAS has 42 utterance categories for coding, and they are divided into two groups: (1) socio-emotional utterances, and (2) task-oriented utterances. Doctor's task-oriented behaviors are defined

as technically based skills used in medical explanation and problem solving that comprise the base of medical education. The affective dimension of doctor behavior includes those exchanges with explicit socio-emotional content related to the building of social and emotional rapport, such as the use of social amenities, empathy, concern, or reassurance.

According to the RIAS analysis, the characteristics of this interaction between an elderly female patient (P) and a male doctor (D) are described relative to the average of all 78 cases as follows. Also see Table 2

Table 2. Ratio comparisons between the average of 78 cases and an elderly female patient's case:

Each Cluster (RIAS)	Average of 78 cases of medical interview		A case of an elderly patient medical interview among 78 cases	
	Doctor (Male)	Patients (N-78) (Male:31) (Female: 47)	Doctor (Male)	Patient (Female)
	Average of Utterances (SD)	Average of Utterances (SD)	Average of Utterances	Average of Utterances
	Ratio of Utterances (%)	Ratio of Utterances (%)	Ratio of Utterances (%)	Ratio of Utterances (%)
1) Open-ended	1.8 (1.9)	0.4 (0.9)	1	1
		0.50%	0.50%	1.00%
2) Closed-ended Question	5.6 (5.6)	2.0 (2.5)	12	8
	6.40%	2.50%	6.30%	8.20%
3) Giving information	18.3 (19.1)	19.6 (18.8)	62	9
	19.60%	23.90%	32.30%	9.30%
4) Advice(D)	2.7 (3.6)	-	15	-
	2.60%	-	7.80%	-
5) Emotional expression	5.8 (7.0)	4.6 (6.0)	4	9
	6.50%	5.60%	2.10%	9.30%
6) Promotion	7.7 (9.0)	2.6 (3.8)	5	1
	8.30%	3.40%	2.60%	1.00%
7) Positive response	23.8 (15.6)	32.8 (22.9)	35	54
	30.20%	48.10%	17.70%	55.70%
8) Negative response	0.7 (1.4)	1.2 (2.4)	7	3
	0.50%	1.40%	3.60%	3.10%
9) Direction(D)	4.5 (3.4)	-	13	-
	6.80%	-	6.80%	-
10) Request for service (P)	-	0.4 (0.9)	-	1
	-	0.60%	-	1.00%
11) Social conversation	2.2 (1.9)	2.3 (2.6)	7	3
	2.50%	4.10%	3.60%	3.10%
Others	12.6 (12.7)	6.4 (6.3)	31	8
	14.70%	8.90%	16.10%	8.20%
Total	85.5 (61.3)	72.3 (51.1)	192	97
	54.20%	45.80%	66.40%	33.60%

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- 1) The ratio of "D's utterances" (66.4%) is twice as many as the ratio of P's utterances (33.6%), which shows strong dominance of D's utterances in the interaction compared to the average ratio. Thus D's strong initiative in this case is obvious.
- 2) The ratio of P's "closed questions"(8.2%) is markedly higher than the average ratio (2.5%).
- 3) The ratio of "D's giving medical information" (32.3%) is 1.5 times as much as the average ratio (19.6%). On the other hand, the ratio of "P's giving information" (9.3%) is markedly much lower than the average ratio (23.9%), which is almost a half. Thus P does not give much information to D in this case.
- 4) The ratio of P's "positive response" (55.7%) is relatively higher than the average ratio (48.1%).
- 5) The ratio of "negative response" by both D and P is over 3%; however, the average ratio is almost zero for both D and P.

4. Qualitative Analysis

First, interactional discourse analysis was used to clarify the discursive nature and process of this problem conversation in terms of "cohesion" (Halliday & Hassan 1976, cf. Ueda 2014), considering the linguistic surface evidence of the context, including the "silence" shared by the doctor and the patient.

Second, a bird's eye view of this interaction was taken in order to clarify the flow and the context bonded by the doctor and the patient throughout their conversation, especially focusing on the "silence" caused by the medical examinations conducted by the doctor.

Third, three medical doctors were asked for their interpretations according to the research interviewing framework (Mishler 1991), focusing on doctor-patient interaction and asking what and how the "silence" takes a role in the context bonded by the

doctor and the patient.

4.1 Interactional discourse analysis

Focusing on the problematic part of the conversation, several "cohesion breaks" were found according to Halliday and Hassan's framework (1976).

4.1.1 Breaking "cohesion"

In this section, I will argue that "breaking cohesion" signifies the representation of "breaking shared/bonded context" between the patient and the doctor. See Transcript (1). (D : Doctor/Physician, P : Patient)

(1) Medical interview between a female patient in her 70's with a paralyzed hand and her doctor (The beginning part is omitted.)

- 1 D : *Dakarasonoo, kinnniku no kinchoodo yuu nowa ne,*
"Well, about the muscle tension,
- 2 *yappakou, nobasu kinniku to, kou mageru kinniku to, sono, kanarazu arundesuyo.*
of course, it exists in the stretching muscle and the bending muscle like this".
- 3 *Demaa, sono yarareru bui ni yotte, docchikano houga tsuyoku yararemasunen.*
well, one of them is damaged more strongly, depending on the damaged part".
- 4 *Dakara, tatoeba ude de yararetara konnna katachi ni narimasunen.*
"Therefore, for example, your arm became this shape when it was damaged".
- 5 *Shinkin yuu hou ga yarareyasuikara, kutto kou kukkyoku shita youna katachi dene.*
"The stretching muscle is more easily damaged, like in this arch shape,
- 6 *mo katamacchau yuukoto ga, ooidesuyo.*
and it tends to get stiff".
- 7 P : *Kou, hipparu chikara wane warito deterun desukedo ne.*
"Like this, I already have pretty good stretching power".

×(a) Breaking "Cohesion" at lexical level by P

8 D : *Un, dakara sore ga ne? Deruyuu youni nattachuuno wa,*
 "Well, because, . . . the reason you regained your stretching power is,
 9 *aa isshoukenmeide sono kunren shitakara desuyo.*
 that you did your best to undergo rehabilitation".

10 *Noukousoku wa noukousoku toshite yapa byouhenwa, aruwakeda keredo*
 "A stroke is a stroke, and your stroke still causes your physical problems, but-

11 *Sono kunren ni yottene, sono shaishano toki to kurabete yoku kangaetemitekudasaiyo*
 in light of rehabilitation, please consider your present condition compared to at first ".
 12 *Yatta-bun dakene, detekita wake deshou?*

"The more you did rehabilitation, the more you regained your power, didn't you?"

13 P : *Hipparu chikara wane, warito hajimekaradeteta, >deta-n< desukedo ne,*
 "I had already regained, >I regain< pretty good stretching power from the beginning,

×(b) Breaking "Cohesion" at lexical level by P

14 *doumonee- (laugh) ni-hon ni chikara ga nakute nee (cough)*
 but well- (laughing) there is no power in my two fingers (coughing).

15 D : *Maa chotto, ketsuatu hakatte mimashouka? Mou ikkai ne.*
Well then, let me examine your blood-pressure, okay? One more time.

×(c) Breaking "Cohesion" at all levels

32-second SILENCE during D's examination of blood pressure

16 D : *130 to 70 desu wa.*
 It is 130 over 70.

17 P : (coughing)

18 D : *Ma, daitai kikai to hakattan to onaji kurai desuwa.*

"Well, now your blood-pressure is almost the same as measured by the machine outside".

19 *Chotto kyou mune ne, choto gomenna muneno oto kikasemoratte*

"Then, now, your heart, excuse me, let me examine your heart sound".

20 *Kore konkai choto kikashitoitene kyoune, suimasen.*

"Let me examine your heart sound today, excuse me".

×(d) Breaking "Cohesion" at all levels

30-second SILENCE during D's examination of heart sound

(The later part is omitted.)

The beginning of the transcript, which has been omitted from this paper, includes the doctor's (D) greeting and an open-ended question about the patient's (P) physical condition. The patient expresses her anxiety and trouble with her paralyzed hand—she is unable to use chopsticks even though she has undergone six months of rehabilitation after the stroke occurred, and she asks how long it will take to cure her hand. The doctor explains how important her rehabilitation is, expands on his explanation, and reinforces the necessity of continuing rehabilitation indefinitely. On the other hand, the patient repeats her anxiety and asks when she can finish her rehabilitation.

The above transcript shows two kinds of "cohesion breaks" between D and P: (1) "breaking cohesion" at the lexical level caused by P's claim against D's explanation (a & b) , and (2) "breaking cohesion" at all levels; i.e., "silence" caused by D's examination of P's blood pressure and heart sound (c & d).

As for the first "cohesion break", although the doctor's explanation (line 6) could be followed by

a simple yes answer, the patient attempts to indicate her correction (objection) by saying, "I already have pretty good stretching power" (line 8). This is against D's explanation, "It (the stretching muscle) tends to get stiff." Thus the "cohesion break" at the lexical level occurs in line 7 (a).

Despite the patient's correction (objection), the doctor continues his explanation and insists on the benefits of rehabilitation (lines 8-11), and attempts to persuade the patient to continue by using a tag question: "The more you did rehabilitation, the more you regained your power, didn't you?" (line 12). However, the patient again repeats her correction (objection) by saying "I'd already regained, >I regain< pretty good stretching power from the beginning " (line 13), which is also against D's explanation. In line 13, the patient reduces her voice while saying "I regain," which is preceded by the past tense expression with the same meaning, "I'd already regained". And then, she continues expressing her anxiety: "But well- (laughing) there is no power in my two fingers (coughing)" (line 14).

The paralinguistic contextualization cues (Gumperz 1982, 1992), such as "laughing" and even "coughing," may indicate the patient's anxiety and weak disagreement. Again, even though the patient shows hesitation and respect toward her doctor, apparently the lexical "cohesion" is broken by the patient expression in line 14(b).

Without responding to her repeated expressions of anxiety, D changes the topic: "Well then, let me examine your blood pressure, okay? One more time" (line 15). Then "a silent interval of 32 seconds" interrupts their communication. P keeps silent during D's medical examination according to the implicit shared medical knowledge of her role within the "frame" (Goffman 1974, 1981; Tannen 1993) as a typical patient. In other words, the context bonded by D and P is supposed to move to the next stage, but this is totally hidden and covered by the "lengthy 32-second silence" without any utterance by P.

After the 32-second examination, another kind of

medical examination, to check P's heart sound, is proposed by D: "Then, now, your heart, excuse me, let me examine your heart sound. Let me examine your heart sound today, excuse me" (lines 19 and 20). After that, another "a lengthy 30-second silence" interrupts the communication between patient and doctor.

The interruptions and periods of long silence begin with the doctor's medical examinations of blood pressure and heart sound (lines 15, 19 and 20). The first examination of blood pressure takes 32 seconds (c). D conducts this examination even though P had already just gotten her blood pressure checked at the hospital by the machine located outside the consultation room. The second examination of heart sound also takes 30 seconds (d).

Both medical examinations naturally stop P's utterance, because P already knows that she should not talk, according to the "frame" (Goffman 1974, 1981; Tannen 1993) which requires that patients should be quiet during medical examinations. By utilizing this implicit shared knowledge bonded with the context, the doctor seems to be able to rationally succeed in interrupting and silencing the patient's expressions of anxiety, and finally changing the topic.

4.1.2 Representation of "breaking context"

Although the doctor explains a lot about the need for rehabilitation and seems to answer the patient's questions, we observe severe "cohesion" breaks which may trigger "breaking relationship" or "breaking bonded context" potentially between this doctor and patient.

As the quantitative analysis by the RIAS shows in section 3 above, this doctor talks a lot; the ratio for D in this case is 32.5%, although that of the average is only 19.6%. The doctor also gives a lot of medical information to the patient; the ratio of D's giving information in this case is 32.3%, which is markedly higher than the average D's "giving information" ratio (19.6%). In contrast, the ratio of P's "giving information" in this case is only 9.3%,

which is significantly lower than the average P's ratio (23.9%).

The doctor seems to be trying to give a lot of medical information to the patient. On the other hand, the doctor interrupts the patient's repeated expressions of anxiety and her questions on two occasions by conducting medical exams preceded by lengthy silence. (See the higher marked ratio of P's "closed question" (8.2%) in section 3 above.) These examinations compel the patient to keep quiet based on the implicit shared knowledge of "frame" between adult patients and doctors (Goffman 1974, 1981; Tannen 1993).

The reason why this patient asks more questions and gives only a little medical information to the doctor is due to the doctor's dominance of the conversation, and therefore, due to the doctor's ignorance of the context bonded by the patient.

The long "silence" interruption in the communication signals a "contextualization cue" (Gumperz 1981, 1992) which stops the patient's statement and changes her topic. According to textual and interactional discourse analysis, "breaking cohesion" potentially represents the breaking of relationship between doctor and patient. A doctor should pay

attention to the potential risk for breaking the relationship that physical examinations, such as checking a patient's blood pressure and heart sound, pose.

4.2 The flow and the context bonded in the dyad interaction

The flow and the context bonded in the dyad interaction are shown in picture 1. The picture also shows the different interpretations of the 32-second silence. Even though there are two silent periods of 32 seconds for the blood pressure examination and 30 seconds for the heart sound checking conducted by the doctor, the patient repeats the same questions in (A) and (B) before and after the silence respectively, asking the doctor how long it would take to regain the power of her paralyzed hand.

According to this flow, it seems that lengthy silence does not break any context relationship of the patient. In other words, even though the doctor repeats his explanation again and again to the patient and makes her shut her mouth, the patient seems to still live in her own context. Thus their relationship remains unchanged.

Picture 1. The flow and the context bonded in the dyad interaction

	D's utterance	P's utterance
<Openig>	D's Question 1	P's A1
	D's Question 2	P's A2
	D's Question 3	P's A3
		P's Q1 (A)
Well, um, I'm telling you many times, <i>Uun, maa sore nanbenmo iimasukedo, hito sorezore</i>	D's Repetition 1 & D's Explanation 1	<i>How long does it usually take to regain the power of my hand?</i> <i>Donogurai futsuwa kono chikara ga denno kakarudeshoune</i>
So well, this is also what I tell you over and over <i>Dakara ano-koremo nanbenmo iimasukeredomo,</i>	D's Repetition 2 & D's Explanation 2,3,4	
Do you regain your power because you did? Yes. <i>Yattabun dakene Detekita wake desho? un.</i>	D's Question 4 & D's Answer by himself	
	Blood pressure-checking Heart sound-checking	
	SILENCE	
As I told you before repeatedly <i>Hai, anooma, koremo nan,nanbenmo yuttekimashita keredomo</i>	D's Repetition 3 & D's Explanation 5	
I cannot tell you how long, because, <i>sorewa ienai dakara</i>	D' Answer & D's Explanation 6	P's Q1' (B)
		<i>How long does it take to recover the hand on average?</i> <i>Heikin dono gurai de moto ni modorutte iundesuka</i>
This is also what I am telling you repeatedly when you come <i>Koremo nanbenmo yuuterukeredomo</i>	D's Repetition 4 & D's Explanation 7	

the same question

4.3. Interviewing narrative analysis

In order to analyze how "silence" possesses metapragmatic functions in diagnostic contexts, three medical doctors (MD. H, MD. M and MD. Y) were asked for their interpretations of the same audiotaped interview data based on the research interviewing method (Mishler 1991). Differences in interpretation of "silence" and its "non-verbal communication" were conspicuous even among the medical doctors in terms of (1) the doctor's way of communication and (2) the significance of the doctor's medical examinations.

In the original analysis shown in 4.1, it seemed evident that the doctor was trying to continue to explain in order to persuade the patient to keep undergoing rehabilitation. By using the patient's "frame", the doctor's examination seemed to stop the conversation, and eventually break the relationship naturally between the doctor and the patient as mentioned in 4.1.

However, in the second analysis of 4.2, which takes into account the flow and the context from a wider viewpoint, the patient seemed to still keep her own way because she repeated the same question, even though the doctor suspended her utterances by conducting the medical examinations.

4.3.1 Different interpretations of MDs

The interviews presented in this section were conducted face-to-face and audiotaped by the author after each subject heard the conversation between the female patient and her doctor shown in (1). The length of the interviews were from 30 to 50 minutes.

The subjects (interviewees) are three MDs (medical doctors). MD. H and MD. M are in their 40s, and MD. Y is in his 70s. MD. H is a psychiatrist in a general hospital in Tokyo and is also a physician at his clinic in Gunma prefecture. MD. M is a family physician at his clinic in Tokyo. MD. Y has just retired from a medical school in Kanagawa after teaching for more than 40 years. MD. Y received a degree of Doctor of Medicine; however,

he did not see patients because he did not take the National Examination for Medical Practitioners, so he does not have a medical license.

4.3.1.1 Interpretations of D's way of communication

MD. H expresses his positive impression of the doctor because he spends considerable time with the patient.

First, MD. H explains how busy doctors usually are, especially at a hospital's department of internal medicine. Second, MD. H mentions how many patients come to see the doctor at a hospital per day. Therefore, MD. H regards the doctor's way of consultation as kind and appropriate, as shown in the transcript (1.1).

On the other hand, MD. M and MD. Y show their negative impressions of the doctor's manner of communication. Especially MD. M criticizes the doctor's medical examination as a tool to stop patient talk and dominant the doctor-patient communication. See (1) and (2).

(1) MD. H (a physician and psychiatrist)

(Transcript 1) *13-pun naika de kaketeirun dattara, zuibun shinsetu ni yatteiru hounanjanai kato omoundesu. 15fun kaketatoshite 15fun kara 18fun gurai kakarutoshite, sousuruto 1jikan 3nin kara 4 nin shika mirenai hazude, gozennchuu ni 3jikan de 10nannin shika mirenai. Gogo mo onajikurainiyattemo, inichichi 20nannintokaiuto naika no shinsatsu dattara, sukunai ninzuo toiukotoni narukara, naikateki niwa futsuu 50nin gurai mitaritoka surukara, zuibun teineini yatterunaa to iu koto desune. (omission) 13-pun purasu 3-pun compyuta nyuuryoku wo kangaeru to, jissai, kaiwaryoo mo ooi wakedesu yone.*

(Transcript 1)

- 1 Considering the very busy situation of the internal medicine department in the hospital,
- 2 I think this doctor is advising the patient very kindly because he confers with her
- 3 for 13 minutes. If the doctor devotes 15, or 15

to 18 minutes for each consultation, then the doctor
 4 can see only three or four patients per hour. Then, within the three-hour consultation time in the
 5 morning, the doctor can see only 10 patients or so at the maximum. If the doctor
 6 continues in the same manner in the afternoon, he will see only 20 patients or so
 7 per day, which means the total number of consultations will be very low.
 8 Generally speaking, physicians see around 50 patients per day, so I think this doctor
 9 is dealing with the patient very kindly. (omission)
 10 If you think of the consulting time the doctor used, 13 minutes for conversation and three minutes for entering
 11 the patient's data in his computer, the total length of this encounter is actually considerable.

MD. H points out that doctors of internal medicine in a hospital have only a limited amount of time to consult with and examine patients and input their data to the computer (lines 10-11). Therefore, compared to the average medical consultation, MD. H evaluates this doctor's way of consultation and communication to be sufficient and adequate (lines 2 and 9), because the doctor spent considerable time (13 minutes) with this patient.

Significantly, MD. H's positive interpretation and evaluation are based on his professional "frame" as a hospital doctor, which I could not consider in my previous analysis, shown in 4.1.

On the contrary, MD. M has a negative impression of the doctor's way of communication and sees the doctor's medical examinations as an "escape" from doctor-patient communication. See the transcription (2).

(2) MD. M (a family doctor and physician)

(Transcript 2) *Kantan ni iuto, kanja no kikitai kotoni Isha ha kotaeteinai desu. Kotaete iru youde kotaeteinai. 2ten desuyo ne. Kanja san ga kikitai koto wa. (omission) Kaiwa wa ponpon dekiteiru, youni omoundesukedo. Ikashodakedesune, wadai wo korotto kaetanowa, ketuatsuhakarimashoutte nigeteru, kore nige desu tabun.*

(Transcript 2)

- 1 Simply speaking, this doctor did not answer what the patient wanted to know. It may seem that he
- 2 answered, but actually speaking, he did not. The patient had two questions.
(omission)
- 3 It seems as if their conversation went well. But at one point, the doctor changed the topic
- 4 abruptly by saying, "Let me examine your blood-pressure", in order to escape from
- 5 the patient. This was his "escape", maybe.

First of all, contrary to MD. H's positive viewpoint, MD. M does not evaluate the amount of time devoted to communication; i.e., how long the doctor took to explain the medical information to the patient. Moreover, MD. M indicates that the doctor's answers were irrelevant to the patient's questions (lines 1 and 2). The patient wanted answers to only two questions: 1) How long should I continue rehabilitation? and 2) Can I stop taking medicine? But the doctor did not answer either question, according to MD. M's interpretation.

MD. M also criticizes the doctor's medical examination as an interruption of the patient's expression of anxiety (lines 6 and 7).

Similarly, MD. Y also expressed his negative impression of the doctor's way of communication, as shown in (3) below.

(3) MD.Y (Ph. D in Medicine, but without a physician's license)

(Transcript 3) *Kono sensei chotto shaberi sugidayo. Oshitsuke gimi. (Omission) Ano Kanja san ga itteirunimo kakawarazu, sokode icchautteinunomo*

kekou ookatta yo. Mada shaberikitte nainoni. Kanja san wa sugoku fuann gatte ita.(Omission)Nanben mo itterutte iwaretara kachin to kuru.

(Transcript 3)

- 1 This doctor talks too much. And he is pushy. (omission)
- 2 Although the patient was still talking, the doctor interrupted her utterances quite often.
- 3 She had not finished her expression yet. The patient felt her anxiety. (omission)
- 4 I will become in a bad mood if you say, "I told you again and again."

MD. Y considers the doctor's communication style too aggressive (line 1), too insistent and persistent (line 2), and too prone to interrupt while the patient is still speaking (lines 2 and 3). In terms of the amount and the manner of the doctor's communication, MD. Y evaluates them all to be negative.

4.3.1.2 Interpretations of D's medical examination

The evaluations of D's examinations both for blood pressure and heart sound are also varied and controversial.

MD. H indicates that D's examinations tighten and deepen the relationship between the doctor and patient. In addition, through D's direct touching of P's body and the collaboration for the examinations, an implicit "convergence" will emerge. See (4).

However, MD. M indicates that the abrupt examination was used to stop P's talk. Furthermore, MD. M himself sometimes uses such examinations as a tool to stop a patient's talk or change the topic. See (5).

(4) MD. H

(Transcript 4) *Kono sensei no tekunikku toshite tsukattanokamo shirenaikeredo. Kikai de hakattanoto onajikurai no dakara hyottoshite mou gairai de kikai de hakattano te de hakarinaoshita*

desho.

(Transcript 4)

- 1 I wonder if the doctor examines the patient's blood pressure as his strategic technique. The
- 2 The patient already got her blood pressure checked by machine outside the consultation room, but here the
- 3 doctor examined it again directly by his "own hand". Well, it seems to me that the doctor is
- 4 intentionally collaborating with the patient. Such collaboration triggers and
- 5 increases "bonding." Doing something together will strengthens interactional "bonding."

Because the doctor examines the patient's blood pressure by his hands (line 2) for the second time at the hospital, MD. H sees it as mutual and direct collaboration done by D and P, which creates "bonding" or "convergence" (lines 4 and 5). MD. H assumes this "bonding" to be tightened and deepened at the nonverbal level by physical touching (line 5).

MD. H also understands D's examination as a strategy. See lines 6 and 7, shown in (5) below:

(5) MD. H

(Transcript 5) *Tekunikku toshite tsukatta noka to issyun omottano. Mata wadai kaeteiruna to omotta.*

(Transcript 5)

- 6 I assume the doctor used the blood pressure examination as a strategic technique. And
- 7 I think the doctor changed the topic here.

Like MD. H, MD. M assumes that D uses the physical exams to change the topic of the consultation (lines 3 and 4). Unlike MD. H, however, MD. M interprets this negatively, as an escape from the patient, and as a "tool" to interrupt P's talk (lines 1 and 2). See (6).

(6) MD. M

(Transcript 6) *Yoku tsukaun desukedo. Kokode zenzen kiite nai. Soreni taisuru kotae wo sezuni,*

ketsuatsu hakarimashou to. Tabun wazato desu. Kore ijou hanashitetemo kono hanashi wa tsuzuku node, chotto ketsuatsu hakarukotode chotto wadai tenkan shiyou to omotteru. (omission) Ketsuatsu wa hakarimasu. Ano yoku wadaitenkan no tokoro de tsukaimasu. Hanashi kiru toki ni. (omission) Tsukaimasu. Shinsatsu ni haittari toka. Chotto hara wo mimasu, ja nodo mimashou, mitaina. Kuchi akesaseru to kaiwa ga tomarunode sokode. (omission) Ikkai hanashi wo tenkai saseruto.

(Transcript 6)

- 1 I also use the same technique. Here the doctor did not hear the patient's expression at all.
- 2 Without answering her questions, the doctor started to examine the blood pressure. Maybe the doctor
- 3 examined it intentionally. Maybe the doctor wanted to change the topic softly by examining the
- 4 blood pressure, because the patient might just keep on repeating her story.
(omission)
- 5 I also examine the blood pressure. Yes, I also examine the blood pressure at the topic changing
- 6 point, when I would like to cut patient talk.
(omission)
- 7 Yes, I often use the blood pressure examination as a tool. I also start to diagnosis. Well, I
- 8 examine the patient's body, throat, and so on. When I ask the patient to open his mouth, then the
- 9 patient stops talking. (omission) At that moment, the topic can be changed.

Straightforwardly, MD. M admits that he also uses such a strategy during consultations in order to stop the patient talking and change the topic.

5. Discussion

In the above interview narratives, we found

different viewpoints and opinions even among medical doctors. Furthermore, there are some discrepancies between our first linguistic and textual analysis shown in 4.1 and 4.2, and also the interview narrative analysis of the three MD's shown in 4.3.

Therefore, we should reconsider the following: (1) what breaking "cohesion" is, (2) what MD's "frame" signifies, and (3) what "contextualization cues" signify.

5.1 Reconsideration of breaking "cohesion"

According to the original linguistic discourse/textual analysis shown in (4.1), two types of breaking "cohesion" were discussed: (1) breaking "cohesion" at the lexical level and (2) breaking "cohesion" at all levels; i.e., interruption by long "silence" due to D's examination of blood pressure and heart sound.

As for the first type of breaking "cohesion", it can be considered as breaking interaction, at least at the surface linguistic level. However, we must reconsider the second type of breaking "cohesion" because it has two opposite interpretations: (1) breaking "shared/bonded context" as shown in (4.1), and (2) creating and strengthening "shared/bonded context" as shown in (4.2). Furthermore, analyses of the MDs narrative interviews show that their different interpretations come from their different viewpoints; i.e., focusing on verbal communication, or focusing on non-verbal communication. MD. H focuses on non-verbal communication and evaluates their collaboration as working together through blood pressure and heart sound examinations. Neither MD. M, MD. Y, nor I interpreted the examinations this way.

Therefore, we shall reconsider the multiple interpretations in terms of not only verbal interactions at the linguistic level, but also of other contextual factors, bearing in mind that we all live at multiple levels both consciously and unconsciously.

5.2 Reconsideration of MD's "frame"

In terms of "frame", we shall reconsider the multi-

layered "frames" of reference and analyze their details carefully. The reason why there are several different interpretations among the MDs is that they have different professional histories and outlooks depending on their specialties, even though they all graduated from medical school.

MD. H is a psychiatrist who is usually concerned about a patient's mind and emotions. He must take the patient's unconscious world into account. By conferring with his patients, he collaborates with them in search of solutions for their mental problems, which may be relatively difficult to reach.

MD. M is a home doctor and general practitioner who mainly sees chronically ill and elderly patients. On the other hand, MD.H is a hospital doctor and a psychiatrist.

Considering the medical, social and environmental contexts, MD. H utilizes his several "frames" of reference; namely, psychiatrist, hospital doctor, and manager of his own clinic. On the other hand, MD. M utilizes somewhat different "frames"; namely, general practitioner and home doctor.

Each "frame" inevitably includes a variety of implicit shared and bonded knowledge, depending on the doctor's professional history and specialty. We should carefully observe what kind of "framing" exists, not only explicitly but also implicitly, and how it is accessed by each participant in the conversation. In this study, multi- "framing" in terms of medical communication, diagnosis, and examination is clearly shown. Thus "bonded context" varies depending on the kind of "frame" and how it is engaged by doctor and patient.

5.3 Reconsideration of "contextualization cues"

Our investigation raises the possibility that "silence" does not always signify breaking relationship, as shown in (4.2 and 4.3). However, we tend to emphasize and analyze one side of "contextualization cues", especially without clear

linguistic evidence. In addition, we should also analyze and reconsider some paralinguistic characteristics, such as laughing and coughing.

6. Conclusion

In order to achieve an in-depth analysis of the discursive interaction, including the art of "silence" in a diagnosis context, we should reconsider each realization of "cohesion", "frame", "contextualization cues" and non-verbal communication behaviors, especially when "convergence" and "divergence" between a patient and doctor in a medical setting is evaluated.

Our investigation raises the possibility that silence does not necessarily signify the breaking of the shared context. There may be cases where empathic relationship with the patient is increased metapragmatically when silence is accompanied by the doctor's direct physical touching. In order to understand the multiple significance of silence, especially in situations where the surface linguistic evidence is not clear, we must carefully consider contextualization cues.

Before concluding, I would like to add my observations of medical interviews between a Spanish female doctor and her patients at the medical center of "Las Palmas de Gran Canaria", one of the Canary Islands. (I mention these observations here as a possible topic for future study.) The most marked difference (compared to Japanese doctors) was the Spanish doctor's way of non-verbal communication, especially when she ended the medical consultations. The Spanish doctor stood up to farewell her patients to the door with several non-verbal communicative behaviors, such as shaking hands one-handed, both-handed, and single-cheek kissing depending on the relationship with the patient and his/her physical and psychological conditions.

In contrast to this Spanish doctor, Japanese doctors do not have such customs of greeting patients

by physical contact such as shaking hands, hugging and kissing. However, Japanese doctors generally conduct the physical examinations such as checking the blood pressure, the heart sound, and so on. Therefore, we should pay much more attention to the metapragmatic functions of not only "silence" but also "physical touching" in a diagnosis context in Japan.

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References

- Goffman, E. (1974). *Frame analysis*. Boston: Northeastern University Press.
- Goffman, E. (1981). *Forms of talk*. Philadelphia: University of Pennsylvania Press.
- Gumperz, J. (1982). *Discourse strategies*. Cambridge: Cambridge University Press.
- Greenhalgh, T. & Hurwitz, B. (Eds.) (1998). *Narrative based medicine*. London: BMJ Books.
- Halliday, M. A. K., & R. Hassan. (1976). *Cohesion in English*. London: Longman.
- Mishler, E. G. (1984). *The discourse of medicine: Dialectics of medical interviews*. Norwood, NJ: Ablex.
- Ozawa H., & Nakayama, M.A.D. (2008). Long-Term Care Insurance in Japan. *Journal of Aging & Social Policy*, 17 (3), 61-84.
- Roter, D. L., & Hall, J. A. (2006). *Doctors talking with patients/patients talking with doctors: improving communication in medical visits*. Westport: Praeger Publishing.
- Stewart, M.A. et al. (1995). *Patient-centered medicine: Transforming the clinical method*. Thousand Oaks, CA: Sage.
- Stewart, M.A. et al. (2013). *Patient-centered medicine: Transforming the clinical method. (Patient-centered care series) 3rd. edition*. London: BMJ Books.
- Tannen, D. (1993). What's in frame?: Surface evidence for underlying expectations. In D. Tannen (Ed.), *Framing in discourse* (pp. 14-56). New York: Oxford University Press.
- Tannen, D., & Wallat, C. (1993). Interactive frames and knowledge schemas in interaction: examples from a medical examination/interview. In D. Tannen (Ed.), *Framing in discourse* (pp. 57-76). New York: Oxford University Press.
- Ueda, T. (2014). *Shinryo bamen ni okeru isha to kanja no communication bunseki. (Patient-Doctor Communication : A Discourse Analytical Approach)*. Tokyo: Hitsuji Shobou.