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Touch without vision: Referential practice in a non-technological environment

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ABSTRACT

In the tradition of interaction studies, the organization of vision has been well investigated since video became available for the detailed analysis of the directions in which participants in interaction look. The focus of this article is rather on the organization of touch, and, in particular, on ways in which reference to a body part is accomplished when the body part is only tactilely accessible to participants. Through the detailed analysis of segments from vaginal palpation (or "pelvic examination") performed by a Japanese independent midwife, I elucidate practices that these participants employ to deal with the limitation on the accessibility of what they refer to in their interaction. The practices to be elucidated include current position marking, spatial-pattern evoking, and being explicitly responsive. The elucidation reveals that reference is interactionally accomplished through deployment of more or less generic practices in ways sensitive to situational particularities. In conclusion, I discuss a possible consequence of the analysis to the conceptualization of human interaction in technological society.

1. Introduction: Visiting a midwife house

The aim of this article is to elucidate the practices by which referencing something in interaction is achieved under certain special circumstances, namely, under the circumstances where vision is not available to participants. As I will elaborate in the following section, these circumstances are characterizable as "problematic" or "limited", from the participants' own points of view. Those practices that I attempt to elucidate in what follows, on the other hand, are all shown to be provided for the organizational order of ordinary human interaction, not distinctive to those special circumstances. In this elucidation, it will be apparent that reference is accomplished through deployment of more or less generic practices in ways sensitive to the various situational particularities and interactional contingencies.

The data to be analyzed were collected at a "midwife house." Midwives in Japan, in contrast to nurses, are legally entitled to practice independently of hospitals and clinics, provided that they hold a contract with an obstetrician. The role of the obstetrician in such cases is to conduct special examinations and occasional tests for the midwife's clients and also to intervene when pregnancies turn out to be abnormal. Midwife houses differ from clinics institutionally, in that midwives can only deal with normal pregnancies and are prohibited from performing "medical" procedures, such as episiotomies, without the supervision of an obstetrician (except in emergencies).[1] Though midwife houses are equipped with various medical

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[1] Many midwives work for the obstetrics and gynecology (OB/GYN) division at a hospital. In Japan, the role they play is different at different hospitals. Some hospitals allegedly decided to leave almost everything to midwives in the case of normal pregnancy, but in the majority of hospitals, midwives may still be completely under the control of doctors, and their role is restricted.

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devices such as ultrasound scanners, on the whole they look like ordinary residential homes; in other words, it rather looks as if such devices have been installed in ordinary houses. My colleagues and I were able to videotape prenatal physical examinations at three midwife houses in the Tokyo area from 2004 through 2007.[2] Each was run by one midwife, who hired two or three other midwives. At one of the three midwife houses, ultrasound examinations were conducted on a regular basis, but at the other midwife houses midwives refused to use an ultrasound scanner in their examinations. More precisely, they seemed to have more concern with manual palpation. (They used only a portable fetal Doppler heart monitor to examine the fetal heart beat.) When these midwives examine a pregnant woman's internal, namely, vaginal, uterine, or fetal, condition with their hands alone, vision is not available to either participant. However, it is occasionally necessary for the midwives to tactilely "show" the woman the exact location that they are currently palpating. Though I aim at general (not particular to this specific kind of setting) practices for referencing without vision, a contextualization of my elucidation may be in order here. Furthermore, I will discuss some implications such elucidation may have for the present status of women's medicine in the final section.

Today in Japan the vast majority of deliveries are performed at hospitals or clinics. The Japanese Ministry of Health, Labor and Welfare (MHLW) estimates that only 1.22% of 1,092,674 deliveries were performed outside hospitals or clinics in 2006. Approximately 80% of these (i.e., deliveries outside hospitals or clinics) were performed at midwife houses. That is to say, 0.99% of all the deliveries in the year were performed at midwife houses (Ministry of Health, Labor and Welfare [MHLW], 2007). One may think of these statistics as showing that in an era of cutting-edge technology, midwives' "old-fashioned" ways of examining, based on hand-manipulation or "maneuvers", are bound to become extinct.

However, there are other interesting statistics. MHLW has counted the number of deliveries in urban and rural areas separately. While the number of the deliveries at midwife houses in the urban areas is estimated to be 1.0% in 2006, the number in the rural areas is 0.7%, substantially less than those in the urban areas. (Note that the total number of deliveries in urban areas is almost ten times larger than in rural areas, and therefore the total rate of deliveries at midwife houses nationwide remains at approximately 1%.) One possible interpretation of this is that, from among more various institutions, such as hospitals, clinics and midwife houses, more people in urban areas than in rural tend to choose a midwife house for their deliveries.[3] Looking at the statistics, I was reminded that when I first visited a midwife house in 2004 and attended a parent class, where the midwife explained the mechanism of labor and what the mother and her partner were supposed to do at the delivery, one pregnant woman said something like the following: When she came there for the first time, she felt very safe and secure, much more so than she felt at the hospital where she took examinations previously, and immediately sensed that this was precisely the place for her. Those women who choose a midwife house for their delivery may seek for and find something at a midwife house that they could not find at a hospital or clinic. Indeed, some midwife houses, including those I visited, are admired for their "natural" and women-friendly approaches by birth activists as well as many pregnant women.

Certainly, midwives' practices may still seem too peculiar for a serious study of obstetric practice in our high-tech society. However, it would be no more useless to investigate what happens in settings which may be peculiar but attract some women precisely in this highly medicalized society, than to examine a rare animal species in order to contextualize the common species of a certain region, and in doing so make its whole ecology more understandable.

Note that I do not intend to positively or negatively evaluate midwives' practices at midwife houses. In fact, what follows may disappoint both those who admire and those who despise midwives' practices, as it depicts what midwives do in their everyday activities as merely mundane. Midwives' practices are not mysterious, esoteric skills, but teachable, instructable, describable and reportable, therefore intelligible to anyone, whether their co-interactants or researchers observing them. The purpose of this article is to demonstrate, through the analysis of short segments of interaction in vaginal palpation (or "pelvic examination") by a midwife, how midwives' practices are analyzable into various common practices. I will elucidate three noteworthy practices that a midwife employs in vaginal palpation (section 3), after I explicate the problem caused by the unavailablity of vision (section 2).

2. Problematic palpation

Two pregnant women from one midwife house, where the midwife did not use an ultrasound device but only her hands to examine pregnant women's vaginal, uterine and fetal conditions, agreed to have their vaginal palpation videotaped. In what follows, I examine several segments of interaction from examinations conducted with them.

In vaginal palpation, the midwife often explains to the pregnant woman the woman's internal condition, by referring to the location that she is currently touching with a demonstrative expression, such as *koko* [here or this place]. A possible problem, however, arises in how the pregnant woman can discriminate what the midwife is referring to from its surroundings. The success of reference may be prerequisite to the accomplishment of the understanding of the explanation,

[2] This study is part of a larger research project on interaction between medical professionals and their clients, that is, pregnant women or patients with specific complaints such as infertility, a pain in the lower abdomen, and so on, in Japanese OB/GYN settings.

[3] Though I will not go further into the detail of this point, I would only like to note that the midwife house where ultrasound was utilized regularly is located in a more traditional area in the downtown of Tokyo, while the other midwife houses are in the suburban residential areas of Tokyo. This regional difference may affect their preferences concerning the use of ultrasound.

and reference with a demonstrative expression may be successful only when accompanied by the recipient's ability to discriminate the location being touched and to which reference is being made. Certainly, when the midwife refers to an internal location, for example, by using the reporting form "*koko ga chikotsu* [this place is the pubis]" during palpation, the midwife's hand causes tactile feeling at the location being touched. In order for the reference to be successful, however, the pregnant woman often, though not always, needs to go further than having the diffuse feeling and succeed in obtaining structured feeling such that the location is now discriminable from its surroundings as specifically being the one of the pubis.

I employ the expression "problem" in the same sense as when Schegloff and Sacks (1973) describe the participants' practices by which they deal with the "problem" of how to bring a current conversation to a close. The problem that arises with referential practice is not an analytical problem to be solved by the analyst's explanation, but a problem to which the participants in interaction orient and which they address in the actual course of their interaction. Furthermore, the problem is not necessarily *trouble* for the participants. In particular, the midwife does not have any trouble solving the problem, but rather deals with it routinely, though, in doing so, she deploys certain practices which she might not otherwise employ.

Certainly, the midwife may be able to adequately tactilely differentiate the location that she is touching with her finger tips, the most sensitive cutaneous sensors. Provided that the success in reference decisively depends on the recipient's differentiation of the referent, however, one should then notice that insofar as the midwife is aware of the pregnant woman's difficulty in tactilely differentiating the referent inside her body, the difficulty leads to the midwife's possible problem to be specifically addressed. There are three points to be made about the participants' possible problems.

First, in abdominal palpation, both participants can see, and also feel, on the pregnant woman's abdomen, what the medical provider refers to with demonstrative expressions.[4] Also in an ultrasound examination, not only can both participants see what the medical provider refers to on the monitor screen, but also the medical provider can feel the abdominal location of it with the probe (transducer) in his or her hand and the pregnant woman can feel it on her abdomen. Contrastingly, vaginal palpation can, therefore, be considered to *lack* visual accessibility. In vaginal palpation, the accessibility of the location being referred to is *limited* in comparison with ultrasound examination and abdominal palpation.

Second, the midwife often closes her eyes during vaginal palpation. This indicates what may be called the superiority of vision (*pace* Heidegger, 1963, and Merleau-Ponty, 1968, though I would rather argue for the essentially embodied nature of vision, and, indeed, have demonstrated it in Nishizaka, 2000a,b, among others). That is to say, it seems to be generally supposed that what is talked about and dealt with in interaction is to be found first of all in the common *visual* field. This is precisely the reason why she closes her eyes and cuts off any possible access to the common visual field – to indicate to her co-interactant that the current operand and referent is located and operated on in some field other than the visual. Closing her eyes is a practice of cutting off the access to the most basic perceptual field and bringing to the foreground a less basic one. The accessibility of the location being referred to in vaginal palpation is thus *limited* also in the sense that it is inaccessible to the most basic modality of perception.

Third, it is simply difficult for pregnant women to tactilely differentiate the interior location being named by the midwife, such as the one of the pubis. Indeed, it is difficult for pregnant women even to see the "baby's" body parts on an ultrasound monitor by themselves. One of the pregnant women who participated in our research at a hospital declined the offer by a midwife to videotape the image on the ultrasound monitor for her, telling the midwife that she could not interpret the image by herself.[5] She said that when she had brought a video home and looked at it, she had been totally unable to see anything meaningful, though when she looked at the monitor with the midwife, she could see the "baby". In other words, it is simply difficult for pregnant women to see a fetal body part on the monitor unless it is named by the medical provider, saying "This (place) is the baby's heart", for example, while pointing to the image on the monitor screen.[6] Appears to be no less difficult for a pregnant woman to tactilely differentiate a location being only felt inside her body, than to visually differentiate a fetal body structure in gray shades on a monitor screen.

For example, the following is an excerpt from interaction during a vaginal examination. In lines 01–02, the midwife (designated as MDW) uses a demonstrative expression, *koko* [here], in announcing to the pregnant woman (PWM) that she is touching the fetus. In response to this announcement, by requesting confirmation with the interrogative particle *ka* at the end of her utterance ("*a soo nan'desu* **ka** [Oh, is that so?]") in line 03, the woman claims that the information conveyed by the announcement (what the midwife is currently doing) is new to her. After giving confirmation ("*#NgN#* [Yeah]"), the midwife elaborates on what she is touching, announcing that she is touching "the fetus wrapped by the uterus". Then, the woman expresses surprise in response in line 06:

[4] See Nishizaka (2007) for the organization of reference in abdominal palpation in a midwife house.

[5] Similar reports by pregnant women were collected by Rayna Rapp and other anthropologists (Rapp, 1999:66–67; see also Mitchell, 2001; Taylor, 1995, 2008 among others).

[6] This is reminiscent of the situation that took place in an operating room in a teaching hospital described in Koschmann et al. (this issue) in which a medical student asks an attending surgeon, "Can we see the cystic duct yet?" What is available to be seen in the scene is determined just as much by the viewers' past experiences as it is by the contents of the scene itself. Having access to a shared visual field will not, in and of itself, ensure that all parties will see the same thing.

(1) [FMW 4: 22:13–20][7]

01 MDW: → °ee:to >des'ne< 'atashi ga ima <**koko**>, akachan ni furete run'
well JD P I P now here baby P touch be
02 de┌su ne°
JD-PL P
"Well, I am now touching the baby **here**."
03 PWM: └ºa soo nan' ┌desu ka°.
oh so JD JD IR
"Oh, is that so?"
04 MDW: └#NgN# shikyuu ni tsutsumare te'ru °akachan
yeah uterus P wrapped be baby
05 ni furete ite:°
P touch be
"Yeah, I am now touching the baby wrapped by the uterus."
06 PWM: ┌e
what?
"Really."
07 MDW: └.hhhh °de shikyuu koo wa ne: yubi ga ippon >hairi< masu::°.
and uterus opening P P finger P one afford JD-PL
"and the opening of the uterus affords one finger to enter."

The pregnant woman's response in line 03, requesting confirmation, reveals that not only is the information conveyed by the midwife's announcement new to her, but also that the woman has not yet discriminated for herself the location being touched and referenced by the midwife. The same can be said about the woman's response in line 06, an expression of surprise.

The demonstrative expression "*koko* [here]" in line 01 refers to the place that the midwife, the speaker, is currently touching. However, the region around the place being touched is only tactilely *sensible* to the pregnant woman. That is to say, though the woman is supposed to have some feeling caused by the midwife's touch, it is evident from the woman's response that the woman has not tactilely differentiated the particular interior location being touched by the midwife's hand, reaching the fetus enclosed within the uterus. If she had been able to do so, her response would have been "yeah", "I see" or the like, rather than "really".

Insofar as the midwife's announcement is no more than reporting what the midwife is currently doing, the fact that the pregnant woman does not claim the tactile differentiation of a particular interior location does not appear to cause any problem for the participants themselves. Indeed, in Extract 1, the midwife goes on to explain the current state of the opening of the uterus, an indication of the fetus's descent in the uterus, which can be heard as the main topic at the moment, without further specification of the feeling that the woman should have in relation to movement of the midwife's hand or the particular location being touched (see Fig. 1 for the location of the opening of the uterus).

In what follows, I examine a segment of interaction in which the midwife provides a distinct type of activity for which the limited accessibility of the touched place to the pregnant woman is oriented to, and dealt with, as the participants' own (rather than an analyst's) problem. The distinct type of activity that I examine is the one in which one participant provides directions to the other on how to do something, that is, it is a form of instruction. Instruction here is only successful if the pregnant woman can tactilely differentiate the location being touched and the direction of the midwife's hand movement.

3. The reference in instruction

The following is an excerpt from the same visit as the one reproduced as Extract 1. During the course of the visit, the midwife told the pregnant woman, who is in her 36th week of pregnancy, that she, the midwife, would later perform a vaginal examination and instruct the pregnant woman on how to massage the birth canal (i.e., the vagina). The purpose of the massage is to make it easier for the fetus to exit smoothly at delivery. It was some time later that the examination was

[7] All the extracts cited in this article are composed of three parts: At each numbered line, there is a romanized original Japanese transcript, and below this are phrase-by-phrase glosses. Finally, a rough English translation is added after each utterance. In the first line, a transcription system developed by Gail Jefferson is used (see Jefferson, 2004b, for the most recent version). In the phrase-by-phrase glosses the following abbreviations are used:

IR	Interrogative
JD	Judgmental
MIM	Mimetic
P	Particle
PL	Polite

The lines discussed in the text are arrowed. The items focused on in the discussion are marked bold.

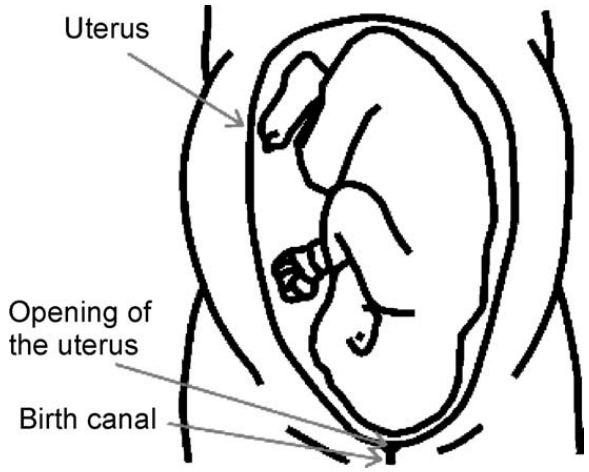

Fig. 1. The location of the opening of the uterus.

actually performed. The woman now has not only to understand the midwife's reports of what she is doing, but also to learn how to independently perform the instructed procedure. In order to become able to do it by herself, she needs to be able to tactilely differentiate the particular location in the birth canal being touched by the midwife and the direction of the midwife's hand movement. In this situation, however, reference to locations in the birth canal can be problematic for the pregnant woman, given the limitation on its accessibility described in the preceding section. In what follows, I explicate practices by which the participants deal with this problem in the course of the instruction: (1) Current position marking, (2) spatial-pattern evoking and (3) being explicitly responsive.

3.1. Current position marking preceding a locational report ("this place is X")

The following is extracted from the segment of interaction immediately after the vaginal examination was begun:

(2) [FMW 4: 21:11-26]

01 MDW: → *.hh eeto ne:: watashi ga furete 'ru no ga:*
well P I P touch be P P
"What I am touching is"

02 PWM: *nn nn*
yeah yeah
"Yeah, yeah."

03 MDW:→ *n:::n koko ga chikotsu:*
well this-place P pubis
"Well this place is the pubis"

04 PWM: *nn*
yeah
"Yeah."

05 MDW: *desu ne:. nn .h °de akachan ga hasamaru ho┌o wa°* koo::=
JD-PL P yeah and baby P be-pressed way P this-way

06 PWM: └°*ja-*°
(then)

07 MDW: *=yuu kanji de #yuu# no ji:.*
like P "u" P letter
"Right? And the way the baby will press ahead has a U-shape like this." [Lines 05 and 07]

08 PWM: *fu:::n*
I-see
"I see."

09 MDW: *#nn# °de kochira no yuu no ji no hoo desu ne:° °°kochira*
yeah and here P "u" P letter P way JD P this-side

10 *no (.) shi̲ta ni mukatte̲ no̲basu n' ┌desu°°.*
P downword pull P JD
"Yeah. And towards this U-shape, pull downwards this way."
11 PWM: *└hfu̲:::n*
I-see
"I see."

There are some points to be noted about this extract. In line 03, the midwife mentions the pubis in the locational report "this place is X" ("*koko ga chi̲kotsu:* [This place is the pubis]"). This report is preceded by the utterance "*watashi ga fu̲rete'ru no ga̲:* [What I am touching is]" (line 01). I first examine what job this utterance achieves. Remember that in Extract 1 as well, the midwife used a complex of the same expressions "*watashi ga* [I am]" *plus* "*furete'ru* [touching]", along with the same locative demonstrative expression *koko* [here or this place]. However, the construction of the whole utterance there was very different from the midwife's utterance in Extract 2. Whereas in Extract 1 the utterance took the form "*watashi ga X ni furete'ru* [I am touching X]", in Extract 2 the utterance in line 01 is taking the form "*watshi ga furete'ru no wa* [what I am touching is]". That is to say, the utterance in line 01 of Extract 2 is constructed as if it were the beginning of what is called a cleft (or pseudo-cleft) sentence in the linguistic literature, namely, a sentential construction in which what can be expressed in a single clause is divided into two clauses (a typical example for an English cleft sentence is *It is the pubis that I am now touching*). Mori (2008, submitted for publication) examines in detail the so-call cleft sentences used in Japanese conversation. I note two of the points that Mori makes.

Having gone through her data corpus, Mori observes that when participants start an utterance with an expression which looks like the beginning of a cleft sentence, they often do not complete the entire sentence in a way consistent with a cleft-sentence structure. Indeed, in Extract 2, after the midwife utters what looks like the beginning of a cleft sentence, that is, an expression of the form "What I am doing is", she does not produce the grammatically expected completer of the started sentence, but it appears that she starts a new utterance unit, complete in itself, in the form "This place is X" in lines 03 and 05 ("*koko ga chi̲kotsu: de̲su ne̲:.* [This place is the pubis]").[8]

Second, Mori points out that the conversational object that she deals with, that is, what looks like the beginning of a cleft sentence, specifies what type of talk follows. One of the examples that Mori cites is what can be translated roughly as this: "What I was very surprised at first was". This utterance projects talk about what the speaker was analyzably surprised at to follow. In our case, the midwife's utterance in line 01 projects talk about what she is now touching to follow. Important to Mori is that talk of the type projected tends not to be produced immediately following the object. It is often a sequence analyzable as a preliminary to that projected talk (such as a sequence for confirmation of something), rather than the projected talk itself, that follows the object immediately. Mori argues that the object provides a space for the speaker to utilize in obtaining the information (as to the recipient's knowledge, for example) necessary for that projected talk. Mori notes that utterances that look like the beginning of a cleft sentence behave in a way similar to what Schegloff (1980) calls "preliminaries to preliminaries" or "pre-pre's".

In Extract 2, however, that type of talk projected to follow by the utterance in line 01, namely, the beginning of a possible cleft sentence, comes *immediately* after this object is produced, though, as I noted, the talk is not constructed as grammatically completing the would-be cleft sentence. What is mentioned there, that is, the pubis, is analyzably what the midwife is currently touching. However, if one examines the midwife's utterances in lines 01 and 03, considering Mori's observations concerning cleft sentences, one sees the interactional job that the utterance in line 01 achieves. In all the examples that Mori cited, it was not the projected talk, but a preliminary to it, that appeared immediately following the beginning of a possible cleft sentence. Certainly, the projected talk in Mori's examples *was* the focal point of the current activity. One should notice, however, that Mori's observation can be reformulated in the following way: following the beginning of a possible cleft sentence, a preliminary to the focal point ensues, rather than the focal point itself. This would not exclude the possibility that the projected talk may ensue following the projective utterance, if the projected talk *is* a preliminary to a still unknown focal point to come later, rather than the focal point in itself. Indeed, one may be reminded that this is precisely the move that Schegloff (1980) seems to take.[9] The production of the beginning of a possible cleft

[8] Incidentally, in the production of a pointing gesture, the timing with which a demonstrative term like 'here' is produced is precisely coordinated with the embodied action of pointing (Hindmarsh and Heath, 2000a,b). A similar level of coordination is assumed here, though the demonstration is performed tactilely rather than visually. It is interesting that the midwife may also highlight this coordination by having the mention of what she is currently doing ("What I am touching" in line 01) precede the locative demonstrative *koko* ("This place is the pubis" in line 03). In doing so, she achieves an explicit connection of the demonstrative to what she is currently *touching*. See also Goodwin (2003a) for how pointing is achieved and what is achieved through pointing in the course of action.

[9] Schegloff (1980) observes two patterns of sequences initiated by a pre-pre. One goes as follows: an action-projection (for example, "Can I ask you a question?") is first produced, then preliminaries to the projected action, such as request for confirmation of the recognizeability of a person, thing or event to be mentioned in the projected action, and then the projected action (*the* question projected in the action projection). The other pattern is not so well-known as this, which goes as follows: an action-projection is first produced, then the projected action, which nevertheless is recognizable as a preliminary to another action, and then this latter action. As is readily apparent, this second pattern of pre-pres is the most relevant to the case here, reproduced as Extract 2, in which the very thing projected in the utterance in line 01 is produced immediately following this utternace, in turn projecting another thing, the focus of the current activity, to come later.

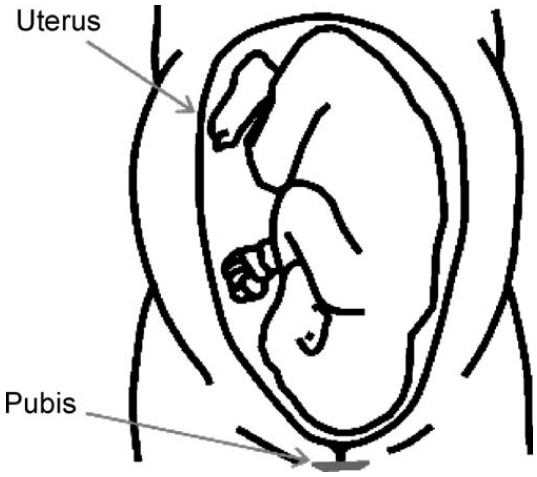

Fig. 2. The location of the pubis.

sentence thus presents at least two alternatives. If the utterance that ensues following it is not the one projected by it, the utterance is expected to be a preliminary to the projected one. If, on the other hand, the projected utterance (or action) ensues following the beginning of a possible cleft sentence, it is expected to be a preliminary to a focal point, which is yet to be made explicit in the course of interaction. There are three points to be made about Extract 2.

First, the utterance in line 01 makes salient the current positioning of the touching hand, marking the positioning as just "current", therefore making it expectable for a "next" to come. In other words, when a "This place is X" report is positioned following current position marking, the report can be heard to designate the starting point, rather than the focal point, of the current activity, and therefore to be a preliminary to something else. What the midwife is currently touching is heard as the starting point, from where the current activity should move towards what can be analyzed as its focus.

Second, the utterance in line 01, current position marking, is not complete in itself either as an expressional form or as a turn-constructional unit (Sacks et al., 1974). Grammatically, the postpositional particle *ga*, the final word in line 01, projects a predicate to follow it, in a manner somewhat similar to the way in which the English copula "is" does. Furthermore, the prosody of the particle ("*ga:*") implies a strong claim to continue the current utterance after the particle. In spite of this incompleteness, following the particle, the pregnant woman responds emphatically, uttering two accented "*nn*"s in line 02. In doing so, the woman displays her understanding that the midwife's utterance in line 01 constitutes an independent, complete action, that is, current position marking, in spite of its expressional and turn-constructional incompleteness. This understanding by the participants frames the following development of interaction.

Third, what follows the current position marking is the locational report "This place is the pubis." Note that the pubis is adequately hard so as to allow its location to be tactilely differentiated from its surroundings with relative ease. Furthermore, the pregnant woman may be able to feel the midwife's touch at her pubis itself. It is not accidental, therefore, that the pubis is mentioned at the sequential position following the current position marking, at which the starting point for the current activity was expected to be produced. Indeed, the locational report is heard not only to report what the midwife is currently touching, but also to invite the woman to tactilely differentiate the location being touched, recognizable as the location of the pubis. The woman's response in line 04, an accented "*nn* [yeah]", can be heard to claim to have recognized the location. The pubis, or the location of the pubis, is thus interactionally constructed, not only as a contingent starting point for the current activity, that is, a starting point that the midwife merely happened to start from, but as a *landmark*, that is, a commonly recognizable place to start from, for the movement of the hand in the ongoing activity (see Fig. 2 for the location of the pubis). Thus, the landmark is interactionally accomplished in a dual way: first, by the provision of the starting point through the exchange involving the current position marking by the midwife (in line 01) and its acknowledgement by the pregnant woman (in line 02), and, second, by the differentiation of the location of the pubis through the sequence of the midwife's invitation to tactilely differentiate the location (in line 03) and the woman's claim to have done so (in line 04).

In fact, what can be analyzably the focal point of the current activity is not produced until lines 09–10, at which the midwife is explicit about the direction in which the hand should go, saying "°*de kochira no yuu no ji no hoo desu ne:*° °°*kochira no (.) shita ni mukatte nobasu n' desu*°° [And towards this U-shape, pull downwards below this]." Provided that the midwife mentioned prior to the palpation that she would give instructions regarding how to massage the birth canal, the utterance in lines 09–10 can be heard to be the point that the ongoing activity has been steering toward from the start. In view of this, it is also notable that the location of the pubis could also serve as the landmark from which the pregnant woman can start to perform the massage for herself subsequently, not only for the midwife's incipient hand movement in the current activity.

3.2. A locational report not preceded by any current position marking

The point that I have been attempting to make may become clearer when one compares Extract 2 with the following one. Extract 3 is taken from another pregnant woman's visit to the same midwife house. The woman is in her 37th week of pregnancy. Earlier in the visit the woman complained that recently she has had some pain around the pubis. The midwife is also referring to the pubis here at the beginning of the vaginal palpation:

(3) [FMW6-2: 01:36-02:03]

01 MDW: → *ne:: koko ga:: chikotsu des 'ne=┌kokon' toko ga n┐e:::¿*
right here P pubis JD-PL P here-P place P see?
"Well this place is the pubis. This spot is."

02 PWM: *└ha : : : : : i ┘*
yes
"Yes."

03 MDW: → *koko ga itain'da ne::*
here P painful-JD P
"You have pain right here, right?"

04 PWM: *°soo des' ne°*
so JD P
"That's right."

05 MDW: *n::::n.*
mm hmm
"Mm hmm."

06 *(1.2)*

07 MDW: *zenkai wa:: °eeto okizu toka daijoobu dattan' deshi(ta 'kke)°*
last time P uh PL-cut like all-right PAST JD-PAST IR
"Last time, uh cuts or something were there?"

The midwife starts here with a locational report "This place is X" ("*koko ga:: chikotsu des'ne*. [this place is the pubis]) in line 01. The report here may also be hearable as an invitation to tactilely differentiate the location of the pubis. The pregnant woman's response in line 02 ("*ha::::::i* [Yes]") is hearable as claiming to have recognized the location. This time, in contrast to Extract 2, following this claim by the woman, the midwife goes on to request confirmation of the exact location of the woman's complaint, by asking her if she feels pain right there ("*koko ga itain'da ne::* [You have pain right here, right?]" in line 03). It is thus evident that here in Extract 3 the location of the pubis, referred to by the locational report, is the location of the focal point of the current activity, that is, the location of the complained pain to be confirmed, whereas in Extract 2 the location of the pubis is *not* the location of the focal point, but rather an initial point of reference by which to locate the exact place and direction of the hand movement to be instructed. Indeed, in Extract 3, after obtaining the confirmation from the pregnant woman, the midwife looks towards the medical records in line 07 to check if there was a perineal laceration (*okizu* or cut) made at the pregnant woman's first delivery.

Thus, it seems clear that the location introduced by a locational report without any preceding current position marking is hearable as the location of the focal point. In this connection, it may be illuminating to examine the construction of the report in lines 01–02 of Extract 1, that is, the report of what the midwife is now touching. I cite the report in question and the response to it here again:

(1a) [01-06]

01 MDW: → *°ee:to >des'ne< 'atashi* **ga** *ima <koko>, akachan ni furete run'*
well JD P I P now here baby P touch be

02 *de┌su ne°*
JD-PL P
"Well, I am now touching the baby here."

03 PWM: *└°a soo nan' ┌desu ka°. .*
oh so JD JD IR
"Oh, is that so?"

04 MDW: *└#NgN# shikyuu ni tsutsumare te'ru °akachan*
yeah uterus P wrapped be baby

05 *ni furete ite:*°
P touch be
"Yeah, I am now touching the baby wrapped by the uterus."
06 PWM: ┌*e*
what?
"Really."

I have a strong sense that the midwife changes the trajectory of the utterance in its course (and I assume that all native speakers of Japanese would share this sense). The construction of the report is unnatural in that the particle *ga* is used here to indicate the agency of touching. Though "'*atashi* **ga** *ima* <*koko*>, *akachan ni furete run' desu ne*" can be translated into "I am now touching the baby here", it would be more natural if *wa* were used instead of *ga* to mark the agency in this case. (I do not have any good explanation for this, though I have a very strong sense of it. My sense may be formulated in the following way: though both "P *ga* Q *da/suru*" and "P *wa* Q *da/suru*" are translatable as "P is/does Q", the former, with *ga*, brings P into focus, whereas the latter, with *wa*, brings Q into focus. In this particular context, it seems to make no sense for the midwife to bring herself into focus rather than "touching the baby".) I suspect, therefore, that the midwife was going to produce a current position marker first (that is, "What I am now touching is"), but at the point when "*ima* [now]" or "*koko* [here]" was uttered, for one reason or another, she gave it up and incorporated the part she had so far produced into a new construction, that is, "I am now touching X here".

If this is the case, was there any intelligible reason for this? One possible reason may be as follows: The midwife reports that she is now touching the baby through the vagina. Note, however, that the pregnant woman expressed her concern about the fetus's descent in the uterus prior to the segment reproduced as Extract 1. If one takes this fact into consideration, the main task for the midwife at this moment should be the examination of the condition of the opening of the uterus. The reach to the fetus still enfolded in the uterus can be thought to be a preliminary to the examination of the opening of the uterus, rather than the focal point of the current activity in its own right. However, to the pregnant woman, who has never gone through this kind of examination before, the midwife's touching of the fetus may be worthy of mention. One possibility is thus that while the midwife was going to mark her touching of the fetus as a preliminary to the focal point (i.e., the examination of the opening of the uterus), she turns out to make an announcement of what she is doing, that is, an activity expectably surprising to the woman. Indeed, the woman ultimately expresses surprise in line 05 in response to the midwife's report. All this serves as another piece of evidence for what I have been claiming, that is, current position marking's job of constructing what follows it immediately as the starting, rather than focal, point of the current activity.[10]

Now, it may be said that when the "This place is X" report is preceded by "What I am touching is", the recipient is now ready to hear that the X is not the focal point of the current activity. If this is the case, the midwife can place various preliminaries to the introduction of the focal point before what is analyzable as the focal point of the current activity is produced. This is exactly what the midwife does in lines 05 and 07 of Extract 2, after the pregnant woman acknowledges the midwife's mention of the pubis. Indeed, one should note that the utterance in lines 05 and 07 is difficult to hear as that focal point. It appears to be designed not to be analyzable as the focal point. The utterance takes the form of telling something. However, it does not tell anything designedly worth mentioning in its own right. It does not carry any *markings* of interestingness and surprisingness in regards to what is talked about in it (such as the "U-shape"), even though what is told in the utterance may be interpretable as interesting or surprising in one way or another. In this sense, it is still rather hearable, in the real-time development of interaction, as a preliminary to the focal point to come.

I am suggesting that the midwife has a good reason for her practice of current position marking under the problematic circumstances where vision is not available. With this practice, she obtains sufficient interactional space to deal with the problem. Now, I turn to what the midwife does in this space. The second practice the midwife uses, which I describe in the next subsection, seems specifically appropriate for creating or highlighting a distinct structure in a vaguely sensible field. In particular, I note that visual patterning is deployed to deal with the problem caused by the lack of vision.

3.3. Spatial patterning as guidance for tactile differentiation

In lines 05 and 07 of Extract 2, the midwife attempts to make discriminable the tactile structure of a vaginal region in the way I describe below, the discrimination of the structure hearably constituting a crucial preliminary to the introduction of the focal point towards which the current activity steers from the already established starting point. Extract 2a is a reproduction of Extract 2, with the starting and focal points marked.

[10] A comment on the locative demonstrative expression "*koko* [here]" in line 01 of Extract 1 may be in order. The demonstrative expression refers to the place that the midwife is now touching. However, it is not expected that the recipient, the woman, can tactilely differentiate the particular place being referred to. In this sense, the demonstrative expression serves to emphasize that she is doing it precisely *here and now*, that is, the current-ness of her touching the fetus, rather than locating something spatially.

(2a) [01-11]
01 MDW: .hh<u>e</u>eto ne:: watashi ga f<u>u</u>rete 'ru no g<u>a</u>:
well P I P touch be P P
"What I am touching is"
02 PWM: <u>n</u>n <u>n</u>n
yeah yeah
"Yeah, yeah."
03 MDW: n:::n koko ga ch̲ikotsu: Starting Point
well this-place P pubis
"Well this place is the pubis"
04 PWM: <u>n</u>n
yeah
"Yeah."
05 MDW: →d<u>e</u>su n<u>e</u>:.n<u>n</u> .h ºde <u>a</u>kachan ga h<u>a</u>samaru ho┌o waº k<u>o</u>o::=
JD-PL P yeah and baby P be-pressed way P this-way
06 PWM: └ºja-º
(then)
07 MDW: → =yuu kanji de #y<u>uu</u># no ji:.
like P "u" P letter
"Right? And the way the baby will press ahead has a U-shape like this." [Lines 05 and 07]
08 PWM: f<u>u</u>:::n
I-see
"I see." Focal Point
09 MDW: #<u>n</u>n# ºde k<u>o</u>chira no y<u>uu</u> no ji no hoo desu n<u>e</u>:° °°kochira
yeah and here P "u" P letter P way JD P this-side
10 no (.) sh̲ita ni mukatt̲e n<u>o</u>basu n' ┌desu°°.
P downword pull P JD
"YeahAnd towards this U-shape, pull downwards this way."
11 PWM: └hf<u>u</u>:::n
I-see
"I see."

What job does the midwife's utterance in lines 05 and 07 do as a possible preliminary to the focal point to come? First of all, note that in the utterance in lines 05 and 07 (roughly: "And the way the baby will press ahead has a U-shape like this.") the midwife mentions "U-shape". Generally, letters have a strong connection to spatial patterning in that letters can only *be* letters because they have strongly structured visual, and therefore spatial, patterns. The strength of the patterns that letters have consists in the fact that one can recognize as one and the same letter a wide range of its shapes in both typewritten and handwritten forms. Because of this, the midwife's mention of "U-shape" with a demonstrative expression *koo* [like this] helps the pregnant woman discern a spatial structure, tactiley discriminable as "U-shape", in the vaginal region touched by the midwife.

Second, a similar thing can be said about the first half of the utterance unit. The midwife mentions "the way the baby presses ahead". Pregnant women at this stage of their pregnancy are supposed to be acquainted with the pictorial image of a fetus pressing through the birth canal, which has been shown to them at prenatal classes organized by clinics and midwife houses that they visit periodically. (Indeed, I met the pregnant woman at one of these classes. Very gratefully, she volunteered to participate in our research. I remember at that class the midwife showed us a series of images that represented the mechanism of labor very realistically.) The expression appears to be designed to evoke a visual image of a fetus descending and revolving through the birth canal at delivery. On the other hand, not only does the expression "the way the baby will press ahead" have a spatial patterning effect, but also the expression "*h<u>a</u>samaru* [press]" appears to be designed to connect the imagery to the feeling being currently caused by the midwife's touch.[11] All this may help the tactile spatial structuring of the woman's birth canal.

I now sum up what I have demonstrated here. When the locational report was produced following the current-position-marking sequence, that is, current position marking and its acknowledgement, the report was understood to present the starting point of the current activity. Once the starting point was established, the current activity was expected to steer towards the focal point. The focal point is now expected to be produced such that it can be analyzed as the focal point towards which the current activity is steering. The utterance in lines 05 and 07, produced prior to, and not analyzable as, the focal point, helps the tactile structuring of the vaginal region, and provides a base for the success of the reference in the focal point, whatever the focal point may be. Indeed, the focal point in Extract 2, that is, the

[11] One may notice that the utterance unit in lines 05 and 07 is also constructed as a cleft sentence, though this may not be so clear from my rough English translation. This construction may be related to the hearablity of the utterance unit as a preliminary, rather than the focus, but I do not have any certain sense about this. It is rather certain, however, that if the utterance was constructed more straightforwardly, such as "**akachan wa** *koo yuu kanji de yuu no ji ni* **hasamari** *masu* [the baby will press ahead in a U-shape like this]", the words "*akachan wa* [the baby]" and "*hasamri* [press ahead]" would be segregated far apart from each other, resulting in a less coherent image.

instructions for massaging the birth canal (ultimately produced in lines 09–10), would not be successful without the appropriate tactile structuring of the birth canal. The woman would not know how to move her hand when she attempts to do it at home by herself.

The same practice, spatial patterning, can also be observed in the following segment, Extract 4, which occurs several seconds after the segment reproduced as Extract 3. During the interval between the two segments of interaction, the pregnant woman told the midwife that she attempted to massage the birth canal at home, but that she did not know how to do it effectively. The midwife put some more oil on her hand, and then restarted the palpation:

(4) [FMW 6-2: 02:39-03:06]

01 MDW: *.hh hai chotto gomennasai ne:*
ok well excuse-me P
"OK. Excuse me."

02 PWM: *hai*
yes
"Yes."

03 MDW: → *n chotto* **kono** *yo ji to: ne: tokee de yuu*
well well this four o'clock and P clock P compared

04 → *to yo ji to hachi ji no hookoo.*
P four o'clock and eight o'clock P direction
"Well **this** four o'clock and, alright? Compared with a clock,
in the direction of four o'clock and eight o'clock."

05 PWM: *ha:::::┌i*
yes
"Yes."

06 MDW: *└n:. .hh kono hookoo ni fuwa::::to, soo soo soo soo*
yeah this direction P MIM P right right right right

07 *soo koo yatte nobi masu yo ne: (.) n ii de ┌su yo::: n*
right this-way like stretch JD-PL P P yeah good JD-PL P yeah
"OK. In this direction like *fuwaa*. Right, right, right, right, right.
This way ((it)) stretches, right? Alright. ((You are)) good. Yeah."

08 PWM: *└°hai°*
yes
"Yes."

First, I focus on the midwife's utterance in lines 03–04. The description of the directions in which to move the hand in the massage includes their comparison with the relative spatial locations of numbers on the face of a clock. This may also evoke a spatial pattern and help the tactile structuring of the birth canal, in that the arrangement of numbers on the face of a clock are also strongly spatially patterned.

Incidentally, a demonstrative expression (*kono* [this]), used to reference a particular interior location, appears very early in the midwife's utterance after the restart of palpation. In other words, the midwife does not produce current position marking here. Furthermore, when the midwife mentions "*hookoo* [direction]" at the end of the utterance in line 04, it turns out that what is introduced with this demonstrative expression is part of the focus of the current activity, that is, instruction on how to massage the birth canal effectively. The direction in which to move the hand to do the massage is explicitly mentioned in the first utterance unit in which a spatial pattern is evoked with the demonstrative expression. Thus, in Extract 4, first, the midwife does not set a landmark for hand movement. Second, she does not initiate the tactile structuring of the birth canal separately prior to the production of the focal point. The reason for this is probably that the occasion is not the first time for the pregnant woman to receive the instruction for the massage, as contrasted with the pregnant woman in Extracts 1 and 2. I will return to sequence-organizational features of this excerpt in the final section.

3.4. Being explicitly responsive

The final practice that I elucidate is what I happened to observe in Extract 4. I have a good sense that this practice is also much related to the problem caused by the limitation on the accessibility of the region in question, though it appears to be a more generic practice. I only describe the practice in this subsection, and will discuss it in the next, final section.

In lines 06–07 of Extract 4, the midwife apparently responds to what she has recognized by repeating the word *soo* [right] five times (''*soo soo soo soo soo* [right, right, right, right, right.]''), which is hearable as accepting and approving what was done immediately prior to it or is still being done. This conduct reveals that when the midwife moved to explain how to move the hand in the direction described in the immediately preceding talk, the pregnant woman reacted (or is reacting) to this move by the midwife. That is to say, this conduct by the midwife is responding to the woman's response to the midwife's prior move. I cite the segment in question here again, marking the midwife's response bold:

(4a) [06-07]

06 MDW: ↳*n*:. .*hh kono hookoo ni fuwa:::to,* **soo soo soo soo**
yeah this direction P MIM P right right right right

07 **soo** *koo yatte nobi masu yo ne*: *(.) n ii de*↱*su yo:::*: *n*
right this-way like stretch JD-PL P P yeah good JD-PL P yeah

''OK. In this direction like *fuwaa*. **Right, right, right, right, right**.
This way ((it)) stretches, right? Alright. ((You are)) good. Yeah.''

Of course, we cannot know from the video what actually happens here, but we can still tell something. The midwife's response is produced immediately following the mimetic expression ''*fuwa::::: to*'', which phonetically represents tenderness. In this context, the expression is hearable as indicating the tenderness of the hand movement in massaging the birth canal. After responding with *soo*'s, the midwife then describes the current state of the region being touched by the midwife and supposedly felt by the woman, as stretching.[12] In this context, the description ''((it)) stretches'' is hearable as related to the tenderness of the hand movement. The description now reveals that, first, in response to the mimetic expression, the woman relaxed the region being touched by the midwife in order to enable the tender movement of the hand around the region, and that, second, the midwife's multiply repeated *soo*'s was responsive to this relaxation by the woman.

By reacting to the mimetic expression as soon as possible, the pregnant woman can demonstrate her understanding of what she should do to perform the massage and her competence in doing it by herself. By responding to this demonstration by the pregnant woman as promptly as possible, on the other hand, the midwife can demonstrate that something prominent, which deserved a prompt response, happened immediately prior to, or is still happening during, the response. Indeed, the midwife responds so promptly that she has interrupted her own explanation in progress. By emphatically responding with the approval token *soo* [right] (deployed in reduplication), the midwife demonstrates her acknowledgement of the pregnant woman's competence which was demonstrated by the woman's preceding (re)action.[13]

In this connection, one note on the construction of the expression ''*koo yatte nobi masu* [this way ((it)) stretches]'' may be in order. The demonstrative expression *koo yatte* [this way] indicates that the midwife is currently touching a particular place and moving her hand around it. This is why it is hearably an integral part of the instruction in progress, an instruction as to how to move the hand in the massage. Note, however, that the midwife uses an intransitive verb whose subject should be the region being touched, rather than the prospective massager (''*nobi masu* [((it)) stretches]''). This construction indicates very strongly that the instruction being currently provided is based on the current condition of the vaginal region which has been accomplished at this moment. Note that, in fact, the midwife says, ''*nobasu*'', the transitive form of the verb, when she provides her instruction in line 10 of Extract 2. Through that construction with an intransitive form in line 07 of Extract 4, the midwife incorporates what the pregnant woman created on the region into the instruction in progress, thus claiming the woman's competence in doing something relevant to the massage being instructed (see also comments on the particles *yo ne* in Note 12). Then, the midwife provides explicitly an evaluation of what the woman has done (''*ii desu yo:::* *n* [((You are)) good. Yeah]'') and closes up the instruction.

The midwife's responding makes the interaction between the participants explicitly interactional, in that, in so responding, the midwife claims her recognition of a reaction by the pregnant woman. Being explicitly responsive can be another resource for the organization of reference to the interior in the current activity, given the limitation on its accessibility. The practice makes transparent to each other what each does and can do, what each tactilely feels, and how

[12] Incidentally, both the current–ness of the described state and the common accessibility of the touched/felt region are marked out by the deictic expression *koo yatte* [this way], which indicates that the midwife is *currently* touching *that* body part of the woman. The particles *yo ne* also bring the common accessibility of the field to the fore. I will not go into the detail of the uses of these particles here, but I hear the midwife claim with *yo* an independent access to what she talks about, and also request a confirmation of it with *ne*. See Kamio, 1997, for relevant discussions on these particles.

[13] The midwife's repeating *soo* [right] five times is hearable not only as an emphatic approval, but as an encouragement for the pregnant woman to keep doing what she is currently doing. Stivers (2004) observes that ''multiple sayings'', such as a repetition of *no*'s, are responsive to ''an in-progress course of action'', rather than to the immediately preceding utterance. According to her observation, certainly, multiple sayings are used to halt that course of action, rather than continuing it. However, Stivers' observation is relevant to my description of what the midwife does in one respect. The midwife, in repeating *soo*, addresses not merely what the pregnant woman did, but also the current interior state that the pregnant woman has achieved, that is, the in-progress character of what the pregnant woman has done or is still doing.

each understands the other's conduct and tactile feeling, and secures the mutuality of their access to the interior, the other's access to which would otherwise be uncertain to each other.

4. Discussion: Human beings as interactional beings

I have pointed out three practices which the midwife may employ to reference locations and directions not available to visual inspection. Of course, I have not demonstrated that they are always employed in similar situations, nor that they are exhaustive. However, noting those practices, and in particular the first two practices, helps to clarify that reference is an intrinsically interactional accomplishment.

The current-position-marking practice, preceding a locational report "This place is X", indicates that the location referred to in that report will not be the focal point of the current activity. Once the recipient acknowledges the marking, she is expected to attend to the ongoing talk until the focal point of the activity is analyzably revealed. With this expectation, the speaker is able to address some necessary preliminaries to the focal point of the activity before producing the focal point. Indeed, the midwife in Extract 2 initiated, in the space created prior to the focal point, first the landmark-setting for the hand movement and then the tactile structuring of the birth canal. This structuring is a very crucial preliminary to the successful instruction of the massage. If the success of the current activity depends on the success of the tactile differentiation of the particular location and direction being referred to in it, the activity is interactional in the following sense. The introduction of necessary preliminaries depends not only on current position marking, but also on the recipient's, the pregnant woman's, acknowledgement of it. Furthermore, following the pregnant woman's acknowledgement, the completion of the current activity depends not only on the midwife's decision on how to proceed, but also on the pregnant woman's conduct in accordance with the expectation set by the current-position-marking sequence, such as her refraining from initiating another activity before the focal point analyzably emerges. The completion of the instruction, which involves the relevant reference to a particular place and direction, is thus an interactional accomplishment of both the instructor and the recipient, rather than the instructor's unilateral production (see Macbeth, 2004, this issue, for the detailed analysis of the (co-)operation of interactional organizations at various levels in an instructional setting, through which the teacher's instructions are achieved).

Not only is the final product of instruction-giving activity, or the reference embedded in it, interactionally accomplished, but also the preliminaries necessary to it are also interactionally constructed. I argued that the setting of a landmark is interactionally achieved by the midwife's invitation to tactilely differentiate the location of the pubis and the pregnant woman's claim to have done so. The same is true of *spatial patterning* with a demonstrative expression. As I noted previously, the practice of spatial-pattern evoking does not only describe the shape of the region being referred to, but attempts to achieve a tactile structuring of the region. Therefore, with this practice as well, the midwife *invites* the recipient to differentiate a tactile structure of the region. This invitation by the midwife initiates a sequence in the strong sense, namely, a sequence in which a first utterance projects a second utterance of a specific, delimited kind to come after it (see Schegloff, 2007 for the detailed account of sequence organization). That is, the differentiation sequence is initiated by a speaker's invitation to differentiate a structure, and is completed by a recipient's claim and/or display of having done so. The appropriate tactile structuring of the vaginal region depends on the adequate completion of the sequence by the recipient as well as the adequate initiation of the sequence.

(2b) [05-08] — Invitation to the differentiation

05 MDW: *desu ne:.n.n .h°de akachan ga hasamaru ho┌o wa° koo::=*
JD-PL P yeah and baby P be-pressed way P this-way
06 PWM: *└°ja-°*
(then)
07 MDW: *=yuu kanji de #yuu# no ji:.*
like P "u" P letter
"Right? And the way the baby will press ahead has a U-shape like this." [Lines 05 and 07]

08 PWM: *fu::.:n* — Claim to the differentiation
I-see
"I see."

(4b) [03-05] — Invitation to the differentiation

03 MDW: *n chotto kono yo ji to : ne : tokee de yuu*
well well this four o'clock and P clock P compared
04 *to yo ji to hachi ji no hookoo.*
P four o'clock and eight o'clock P direction
"Well this four o'clock and, alright? Compared with a clock, in the direction of four o'clock and eight o'clock."

05 PWM: *ha:::::┌i* — Claim to the differentiation
yes
"Yes."

Insofar as the practice of spatial-pattern evoking is employed as a preliminary to the demonstration of the massage, and the tactile structuring of the pregnant woman's interior region, achieved with the practice, is necessary to the demonstration, the success of such a demonstration, and the reference embedded in it, is also interactional in the sense that it depends on the successful completion of the preliminary sequence by the recipient.

Certainly, these practices are employed to deal with a particular problem. The fact that participants employ those practices that they might not otherwise employ is evidence for their orientation to this problem. The setting I have examined is distinctive in several respects. It is strongly task-oriented, and, as I have mentioned repeatedly, the participants' accessibility of common fields for interaction is limited. All the practices that I have explicated were employed to deal with the problem that arose in this distinctive situation. Some may suspect, therefore, that the interactional character of the achievement of reference is restricted to this distinctive situation. One should notice, however, that the problem only brings what is usually "seen but unnoticed" (Garfinkel, 1967) to light.

One should remember that the reference problem the participants oriented to was occasioned by the intrinsically interactional character of the organization of reference. Precisely because of this character, the limitation on the accessibility of the common fields can cause a problem. Depending on any interactional and situational contingencies, the interactional character of the organization of reference may occasion various interactional problems with precisely this organization, and at the same time provide various resources for settling them, which are also intrinsically interactional. Those practices that I have explicated in this article are some of those interactional resources.

In particular, the third practice, the practice of being explicitly responsive, is interesting in this respect. It presupposes and exploits the very interactional character of human activity, the fact that human activity is organized by each participant's conduct being sequentially related to others' conduct in one way or another. The practice is a generally available device to provide an explicit sequential structure to the in-progress interaction. It seems that in many cultures, a set of sequentially responsive conduct forms is available to their members. Probably, specific forms for various responding utterance types such as answering, agreeing, disagreeing, accepting, rejecting, confirming, disconfirming, etc. are among those sequentially responsive forms. So are various emotional expressions such as laughter, surprise, etc., and various one-word questions such as "what?", "huh?", etc. These forms are generally expected to be produced in a sequentially responsive position where what they are responsive to is commonly transparent to participants. Precisely because of this, if they are produced in a sequential position where what they are responsive to is not transparent, a search for what they are responsive to may be begun by the recipient of the forms. Producing a sequentially responsive form may thus serve to restructure the in-progress interaction such that a piece of prior conduct by a participant is reorganized into what is to be responded to with this very responsive form.[14] One may also produce a sequentially responsive form simply to be explicitly responsive, with the effect of highlighting the structure of other participants' prior or in-progress conduct in interaction. This is precisely what the midwife in Extract 4 did, explicitly confirming or approving what the pregnant woman had done.

The ultrasound scanner is an artificial device that was invented to settle the problem of the limitation on the accessibility of the common fields for interaction. Though I cannot imagine how an ultrasound scanner can be used for instruction in the vaginal massage, one might be able to imagine some technology to relieve the problem of the limited accessibility of the common fields. However, what would the difference be? The interactional device used to deal with the problem in Extract 2 was to expand the sequence. The core sequence there was composed of two actions, that is, demonstrating how to move the hand ("Pull downwards this way" in lines 09–10) and claiming to understand it ("I see" in line 11). The whole sequence, initiated by the midwife's current position marking, was substantially expanded prior to this two-part core sequence. How much the sequence is expanded may depend on how problematic the limitation on the accessibility of the common fields is. One may remember that in Extract 4 the sequence is less expanded, due to interactional contingencies, such as the pregnant woman's relative familiarity with the massage technique being instructed. More technically, while in Extract 2 three preliminary sequences (lines 01–02, 03–04, and 05–08) are produced prior to the core sequence (lines 09–11), in Extract 4 there is only one preliminary sequence (lines 03–05) prior to the core sequence. Furthermore, as I noted, in Extract 4 the midwife's utterance in the preliminary sequence is designedly incorporated into the first part of the core sequence, by the midwife's construction of that utterance precisely as a description of the direction (*hookoo*) in which to move the hand in performing the massage.

One may notice that sequences in those cases that I cited as "contrast cases", that is, Extracts 1 and 3, consist of two subsequences, rather than only one core sequence. In Extract 1, the midwife's announcement of what she is currently doing ("Well, I am now touching the baby here." in lines 01-02) and the pregnant woman's response ("Oh, is that so?" in line 03) are first produced, and then followed by the midwife's elaboration of the announcement ("Yeah, I am now touching the baby wrapped by the uterus." in lines 04–05) and the pregnant woman's expression of surprise ("Really." in line 06).

[14] This argument is related to Schegloff's (2007) discussion on "retro-sequences" and Schegloff's (1968) observation on conditional relevance.

(1a) [01-06]

01 MDW: *ºee:to >des'ne< 'atashi ga ima <koko>, akachan ni furete run'*
well JD P I P now here baby P touch be
02 *de┌su ne*ºº
JD-PL P
"Well, I am now touching the baby here." — Subsequence 1
03 PWM: *└ºa soo nan┌desu kaºº.*
oh so JD JD IR
"Oh, is that so?"
04 MDW: *└#NgN# shikyuu ni tsutsumare te'ru ºakachan*
yeah uterus P wrapped be baby
05 *ni furete ite:*ºº
P touch be
"Yeah, I am now touching the baby wrapped by the uterus." — Subsequence 2
06 PWM: *┌e*
what?
"Really."

Whether this may be a post-expansion of the core announcement sequence (announcement and response) or a four-part sequence,[15] one should note that the pregnant woman's second response, expression of surprise, does what her first response does not do. Her first response ("Oh is that so?") receives the announcement and claims that the announcement contains information new to her, but it does not reveal what particular kind of information she takes it to be. In contrast to this, her second response ("Really.") reveals that she takes the announcement, together with its elaboration in lines 04–05, to be not only new, but something unexpected which she should be surprised at. As I indicated earlier, it appears, the midwife finds the announced information to be specifically worthy of mention, and if this is the case, it is important for the midwife to obtain a response from the pregnant woman which reveals the woman's appreciation of the specificity of information. In view of this, one may say, the midwife's more detailed description of the state of the baby being touched is occasioned by the pregnant woman's first response, and encourages a more substantial response than a mere registering of the newness of the information. It may appear, therefore, that the four-part structure of the sequence is an interactional resource for participants to deal with an interactional problem, the problem of pursuing a more desirable response.

In Extract 3, the first subsequence is hearable as a preliminary to the second sequence. That is to say, the midwife first (in line 01) reports that she is currently touching the pregnant woman's body part (i.e., the pubis), and then (in line 03) asks the pregnant woman about the pain at *that* part. The pregnant woman first (in line 02) receives the midwife's report, and in response to the midwife's request for confirmation, gives confirmation (in line 04).

(3a) [01-04]

01 MDW: *ne :: koko ga:: chikotsu des 'ne=┌kokon' toko ga n┐e:::¿*
right here P pubis JD-PL P here-P place P see?
"Well this place is the pubis."
02 PWM: *└ha : : : : : :ı* ┘ — Subsequence 1
yes
"Yes."
03 MDW: *koko ga itain'da ne:*
here P painful-JD P
"You have pain right here, right?" — Subsequence 2
04 PWM: *ºsoo des' neº*
so JD P
"That's right."

Though, as I argued earlier, the body part that the midwife references in line 01 is the locus of the focal point of the current activity, that is, the activity of having the pain around the pubis confirmed, it may still be difficult for the pregnant woman to recognize the body part that the midwife is touching as the location of the pubis independently, without having that part so named by the midwife. In this view, it appears, the preliminary sequence is a resource for participants to deal with this referential problem, that is, the problem as to how the pregnant woman is to know that the part being referred to by the midwife is the location of the pubis. This problem may also be caused by the limitation on the accessibility of the body part in question. One should note, however, that this problem is different from the one the participants face in Extract 2 in at least

[15] The entire sequence, reproduced as Extract 1a, looks very similar to what Maynard (1997, 2003) calls a "News Delivery Sequence", a four-part sequence, consisting of announcement of news, response, elaboration, and assessment. I note, however, that what the midwife announces is not news in the same sense as what Maynard cites, because what the midwife announces lacks any valence, good or bad.

the degree of difficulty in the structuring of the touched region. In sum, different kinds (e.g., Extract 1) and degrees (e.g., Extract 3) of interactional problems thus motivate different ways of organizing and/or expanding sequences and/or utterances.[16]

The point being made here is that some technology may make this kind of expansion unnecessary. I would not deny, of course, the importance of technology which makes expansions of sequences dispensable when one needs to deal with very urgent problems. I wonder, however, if we really do always need this kind of technology. The midwife and the pregnant woman were able to deal with their problem interactionally, by merely expanding the sequence. One may be reminded of what Rapp (1997, 1999) says about obstetrical ultrasound: Before ultrasound or sonography, "almost all of the cues depended on the pregnant woman's reportage. Now, sonography bypasses women's multifaceted embodiment and consciousness, providing knowledge of the fetus independent of her own framework... Moreover, that framework reduces the range of relevant clues for whose interpretation women act as gatekeepers" (Rapp, 1999:121). In any event, the interactional devices that the midwife and the pregnant women employed demonstrated and proved directly the interactional competence that human beings have. This may have something to do with the feeling a pregnant woman had when she visited the midwife house for the first time, which I cited at the beginning of this article.[17]

Hanks (1990, 1992) argues that reference with a deictic expression is accomplished in our "lived space", namely, in the interactional context that participants jointly perceive and experience and in which they jointly perform various activities and actions. In particular, he notes that the interactional context, which serves as the ground for referential practice, is shaped by the referential practice as well as shaping it. In this article, I have elucidated practices that participants actually deploy to organize and reorganize the interactional context, addressing a specific interactional problem (see also Zemel et al., 2008 for ways in which participants jointly organize a "complex" interactional context for deictic reference). The elucidation has revealed that reference is a contingent and *in situ* accomplishment in interaction. This study, I hope, further contributes to the explication of the intrinsically interactional nature of human beings.

Finally, the detailed analysis of videotaped actual interaction, inspired by conversation analysis, has revealed the interactional character of perception (Goodwin, 1994, 1995, 1996a,b, 1997, 2000, 2003a,b; Goodwin and Goodwin, 1996; Nishizaka, 2000a,b, 2003, 2006, for example). It has elucidated various practices by which participants in interaction achieve the perceptual structuring of the environment in and through the actual development of interaction. However, the focus of the analysis has been basically on *visual* structuring (see also Lynch, 1985, 1988, for very illuminating explication of practices of visual structuring). This is probably because video, which became available for research decades ago, made accessible to interaction studies the different directions in which participants looked and the things to be found in these directions. These were evidently significant for the organization of interaction. On the other hand, investigating the tactile structuring of the environment in its own right is still rare (Nishizaka, 2007 is one exception, and see also Hindmarsh et al., this issue, for the importance of sharing tactile information in a specific setting). The present study is also an attempt to demonstrate the interactional significance and the analyzability of touch, and in particular of touch in the absence of a basic perceptual modality, that is, vision.

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[16] Expansion of a sequence is one of the domains that have been most intensively investigated in conversation analytic tradition. Pre-expansion of an announcement sequence, for example, is now known to address the interactional problem as to the prospective recipient's possible knowledge of what is about to be announced (see Sacks, 1992; Schegloff, 2007; Terasaki, 2004; among others). Insert expansion, that is, insertion of a sequence between the first and second parts of the base sequence, addresses such interactional problems as troubles of hearing and understanding of the preceding utterance (i.e., the first part of the base sequence), difficulty of formulating a response to the preceding utterance, and the like (see Schegloff, 1972, 2007, among others).

[17] It is not my job to evaluate ultrasound, midwifery and the like, but if some pregnant women tend to have the same kind of feeling as that woman had, this is a phenomenon to be investigated in its own right. On the other hand, one should note, it is imaginable that there are many women who feel safe and comfortable with a hospital. This is another phenomenon to be investigated in its own right.

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