— (1988). Conversational analysis. In *Linguistics: The Cambridge Survey, Volume IV. Language: The Socio-cultural Context*, F. Newmeyer (ed.), 251–276. Cambridge: Cambridge University Press.
Stenström, A.-B. (1990). Lexical items peculiar to spoken discourse. In *The London-Lund Corpus of Spoken English: Description and Research*, J. Svartvik (ed.), 137–175. Lund: Lund University Press.
Stubbs, M. (1983). *Discourse Analysis: The Sociolinguistic Analysis of Natural Language*. Chicago: University of Chicago Press.
Svartik, J. et al. (1982). *Survey of Spoken English: Report on Research 1975–81*. Lund: Gleerup.
— and Quirk, R. (1980). *A Corpus of English Conversation*. Lund: Gleerup.
— (ed.) (1990). *The London-Lund Corpus of Spoken English: Description and Research*. Lund: Lund University Press.
Tannen, D. (1982). Oral and literate strategies in spoken and written language. *Language* 58: 1–21.
— (1989). *Talking Voices: Repetition, Dialogue and Imagery in Conversational Discourse*. Cambridge: Cambridge University Press.
Wilson, J. (1989). *On the Boundaries of Conversation*. Oxford: Pergamon.
Wierzbicka, A. (1987). Boys will be boys: 'Radical semantics' vs. 'radical pragmatics'. *Language* 63: 95–114.
Wood, M. (1986). *A Definition of Idiom*. Indiana University Linguistics Club.
Zwicky, A. (1981). Styles. In *Style and Variables in English*, T. Shopen and J. Williams (eds.), 63–83. Cambridge, MA: Winthrop.

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A phonetic description of some repair sequences in Akan conversation

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Abstract

Natural human conversations are hardly 'error-free', due to the properties of interaction. Repair is therefore a concomitant part of any natural conversation. Phonetic (and sometimes Morpho-syntactic) cues are deployed to signal repair in conversation.

Evidence is provided from natural interactions to show that such phonetic cues as pauses; prolongation of phonic or syllabic elements; loudness and pitch may be deployed singly or conjointly to signal repair.

The paper also demonstrates that a detailed knowledge about repair provides a considerable insight into turn-regulation.

1. Introduction

What speakers avoid doing is as important as what they do. Self-correction of speech and writing, and the corrections of others in conversations ('I can't understand what you say') in classrooms, and over editorial desks is an unending business, one that determines the outlines of our speech just as acceptances determine its mass. Correction, the border beyond which we say 'no' to an expression, is to language what a seacoast is to a map. (Bolinger, 1953/1965: 248)

A speaker finds a word in his mental store which has the correct outline characteristics. He does not have time to check each segment of the word in detail; but possibly relies on a monitoring device to stop the utterance of too many inappropriate words. If, however a word happens to have both phonetic and semantic resemblance to the word he wants, it is likely to pass the monitoring device and be uttered. (Aitchison, 1981: 229)

Bolinger and Aitchison's statements point to the fact that natural conver-

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sation is hardly error-free or that any real conversation is bound to be interspersed with speech errors, pauses, hiatus and the like.

This fact is bolstered by Jackson (1932) who has argued that speech in which a hesitation pause does not occur is inferior speech, either because it may have been rehearsed beforehand, or because the speaker may be merely joining a number of standard phrases s/he habitually repeats. The 'context of situation', according to Hymes, always affects our speech. Specifically, the elements of a speech situation, namely: set and scene; participants; ends; act sequence; key; instrumentalities; and genre all affect and shape our communicational strategies. It is because of the above factors that human beings hardly ever manage to equate their linguistic performance potential with their communicative competance.

I have been examining some stretches of talk occurring in conversations, some of which psycholinguists classify as 'slips of the tongue', 'interjections' and 'corrections' (Aitchison 1981; Clark and Clark 1977) but all of which are classified by conversational analysts (ethnomethodologists), notably Schegloff et al. (1977), as 'repair' sequences.

My interest has basically been centered around the phonetic cues used by speakers to signal/initiate as well as to carry out repair. Specifically, my attention has been focused on the phonetic characteristics of the 'repairable' (reparandum) and 'repaired' (reparatum) units.

The rationale behind my interest is that I expect a detailed knowledge about *repair* to yield considerable insight into conversation management in general and turn-taking strategies in particular.

2. Akan

Akan, the language from which I collected my data, is a KWA tongue spoken in Ghana in the West African sub-region. It is the native tongue of about 40% (1960 Census) of Ghana's 12.2 million people (1984 Census). It is spoken in the Asante and Brong Ahafo regions and parts of the Western, Eastern, Central and Volta Regions of Ghana.

The Anyi, Nzema, Ahanta, Efutu, Awutu, Anum, Kyerepong and Larteh speak Akan as a second language.

There are three main dialects of Akan, namely: Asante, Akuapem, and Fante. Other sub-dialects are: Akyem, Wasa, Sehwi, Kwahu, Gomua, and Agona.

3. Data

The data that form the basis for this paper were collected in Ghana from Akan speakers, both male and female. It consists of six informal conversations in Akan, each lasting 25 minutes. The conversations were recorded without the prior knowledge of the interactants. They were, however, informed about the recording and the purpose for which they were recorded. After the interactants themselves had listened to the conversations they expressed no objections to it being used for academic purposes.

With the aid of a tape repeater, an orthographic transcription of the recorded conversations was made. This was then followed by a detailed impressionistic transcription of the relevant portions.

A stop-watch was used to measure the duration of the pauses.

4. Repair

'Repair' is sometimes wrongly equated with 'correction' — the replacement of an error or a mistake by what is correct. It ought to be noted, however, that there is more to repair than just correction. Repair involves such categories as: correction proper/or error replacement (Levinson 1984); word recovery or word search; and various forms of editing (self and other). It is a device for rectifying mishearings, misunderstandings and non-hearings.

As Schegloff et al. (1977: 361) have argued, the organization of repair operates in conversation and is addressed to 'recurrent problems in speaking, hearing and understanding'.

The extracts below will help make this statement clearer.

(1)

KO : *Na maame se menkɔka nkyerɛ menkɔkra no.*
AB : *Aaa*
KO : Mother said I should go and tell I should go and bid her farewell
AB : Aaa

(2)

KY : *Enti ɛbaa saa no akyeampoma bɛn na mode kɔe?*
BO : *Yee?*
KY : *Akyeampoma bɛn na mode kɔe?*
BO : *Asem-pa-yɛ-tia*
KY : *Asɛm-pa-tɛ-tia. Aaa.*

KY : So when that happened what staff did you take along?
BO : Pardon?
KY : What staff did you take along?
BO : A-genuine-story-is-argued-in-brief.
KY : A-genuine-story-is-argued-in-brief.

In example 1 the repairable is *menkɔka nkyerɛ* 'I should go and tell', and the repaired utterance is *menkɔkra no* 'I should go and bid her farewell'. The interactant first utters the repairable, realizes the error, pauses and then utters the repaired item. The repair in this extract is addressed to a problem in speaking on the part of KO (the current speaker).

In example 2, the repair is addressed to the problem of hearing. The current speaker, KY, produces the stretch *Enti ɛbaa saa no akyeampoma bɛn na mode kɔe?* 'So when that happened what staff did you take along?' BO, the next speaker, does not hear what KY says. He therefore asks KY what he (KY) said and KY provides the repaired utterance *Akyeampoma bɛn na mode kɔe?* 'What staff did you take along?' BO then provides KY with the name of the staff, (*Asɛm-pa-yɛ-tia* 'A genuine-story-is-argued-in-brief'.

The discussion so far suggests that repair helps interactants to solve problems emanating from non-hearing as well as difficulty in speaking.

In fact, as Bolinger has argued, the motive behind repair is intelligibility. Specifically, repair helps conversationalists to have a mutual understanding of the discourse.

In natural conversation, speakers replace a 'repairable' or a word that is the source of trouble with a 'repaired' word, and this suggests that such repairable words may have been misplanned. Psycholinguists such as Clark and Clark (1977) have argued that when planning is disturbed or needs correcting, speakers may still try to utter the constituent as a whole rather than in part, and this often results in the speakers retracing their steps. In fact it has been observed that in some cases ('self-initiated self-repair') speakers are often conscious of the *mistakes* and the recovery problems and signal their reasons for embarking upon the repair to the listeners.

In the extract below, the speaker, DA, utters the repairable *wɛlde progyɛt* 'world project'. He then pauses, utters the repair-initiating signals *adeɛ yi* 'this thing' and *ɛɛ* 'er' before producing the repaired stretch of utterance *Kwae progyɛt* ('kwae project').

The first repair-initiating signal *adeɛ yi* 'this thing' tells us that the preceeding utterance is a repairable and the second repair-initiating signal *ɛɛ* 'er' tells us that the speaker is embarking on a word search.

(3)
DA : *Wɛlde progyɛt adeɛ yi ɛɛ* Kwae project.
KO : *Aaa* Kwae project.
DA : World project this thing er Kwae project
KO : Yes, Kwae project.

Another reason or factor that may lead to a repair is that speakers will under normal circumstances want to sound as clear, certain, precise and distinct as possible; therefore, when they fail to do so, they embark on repair.

Finally, as Taylor (1969), Butterworth (1975) and others have argued, cognitive anxiety and many other factors lead to planning difficulty, and this by and large results in repairables and may subsequently lead to repair.

Repair has been classified by Schegloff et al. (1977: *passim*) into broadly two types, namely 'self-repair' and 'other-repair', or 'self' and 'other' for short.

Self-repair, also called 'individual' or 'ego' repair (Parsons, 1937) refers to repair done by the speaker of the problem or repairable. In other words, it is repair performed by the speaker himself.

It ought to be noted that performing repair is distinct from initiating it. Thus the person who prompts, signals or initiates the repair may not necessarily be the one who produces the repaired item. The extracts below will help explicate the above claim.

(4)
AY : *Wose* ***ɛɛ nipa*** *baako a ɔbae no, ɔno na waba aba aba yi?*
BO : Aane. Saa na merekyerɛ
AY : So you say (think) *ɛɛ* it is the person who came who has come again and again (reincarnated)?
BO : Yes. That's what I'm showing/saying.

(5)
DA : *Anka woko oo! Anka woama wo yere adi kan dadada.*
EF : *Anka mɛyɛ dɛn?*
DA : *Mese anka woama wo yere adi kan dadada.*
EF : *Na sɛ menyɛɛ mo bɔne biara.*
DA : *Tie deɛ ɔrekeka.*
DA : You would have left! You would have asked your wife to leave (this place) long ago.
EF : Pardon? What would I have done?

DA : I said you would have asked your wife to leave (this place) long ago.
EF : But I haven't offended any of you.
DA : Listen to what he is saying.

In example (4) we see that the person who performs or accomplishes the repair (AY) is the same person who initiated the repair operation. The repair here involves word search and the voiced pause (ɛɛ) is used to signal the repair. The repaired item is *nipa* 'person'. The repair is done in the same turn.

In example (5), however, we see that the person who prompts or initiates the repair (EF) is not the one who accomplishes the repair. Here it is DA who performs or accomplishes the repair.

The repair here involves nonhearing. DA says *Anka wokɔ oo. Anka woama wo yere adi kan dadada.* 'You would have left! You would have asked your wife to leave (this place) long ago.' EF does not hear what DA says and therefore asks what he said. DA then performs the repair. The repair here is termed other-initiated self-repair.

Hockett (1967) and Du Bois (1974) have argued that if repair involves self-correction it regularly occurs within a sentence.

Other-repair is referred to in the literature as 'other', 'society' or 'alter', and it involves cases where the repair is done or performed by a speaker other than the producer of the repairable or trouble source. Other repair may be self-initiated or other-initiated. Examples (6) and (7) below are referred to in the discussion which follows.

(6)

EF : *Enti medeɛ mefeel sɛ ɛsɛ sɛ* ***adeɛ yi ɛɛ ayi***
KD : ***Aban***
EF : *ɛsɛ sɛ aban tua mo ka.*

EF : So (as for me) I feel that this thing ɛɛ this man ....
KD : (The) Government
EF : The government ought to pay (compensate) you.

(7)

KA : *Sɛ meretwam na Ama gyina hɔ a, anka merenhu no.*
BO : *Ama bɛn? Yɛmfrɛ no Ama. ɔde Akosua.*
KA : *Sorry, Akosua*

KA : If I'm passing by and Ama is standing (there) I cannot recognize her.
BO : Which Ama? We don't call her Ama. She is called Akosua
KA : Sorry, Akosua.

Example (6) involves word search/recovery. The current speaker, EF, says *Enti medeɛ mefeel sɛ sɛ . . .*; he realizes that the repaired item is not readily available to him and he initiates the repair (the word search) with the repair-initiating signals *adeɛ yi* 'thing thing', ɛɛ (a voiced pause) and *ayi* 'this man'. He is still unable to recover the repaired item and the next speaker, KD comes in to perform the repair by producing the repaired item *Aban* '(the) government'.

Example (7) involves correction proper. Here the current speaker, KA, produces the repairable *Ama* (Name of a girl/woman born on Saturday). BO, the next speaker then comes in to initiate and perform the repair. He tells KA that the girl is not called Ama: she is called Akosua. The above examples, as well as other cases found in my data, suggest that with other repair the repairable and repaired items are found in different turns.

Schegloff et al. (1977: *passim*) have gone beyond a mere classification of repair. They have, for instance, established that, with English speakers, self-repair is preferred and other-repair is a dispreferred activity.

This paper does not seek to test or further explore these proposals about the preference organization for repair. It is quite interesting, however, to note that Parsons's (1937) argument that external control, that is, control by others, will not adequately account for or guarantee social order is in line with Schegloff et al.'s assertion. As has already been stated, repair may be self-initiated or other-initiated. Self-initiated repair is repair initiated by the speaker of that which is being repaired, without prompting.

Unlike self-initiated repair, other-initiated repair involves a situation where a speaker other than the producer of the repairable initiates the repair.

From the above categorizations, it is possible to distinguish: self-initiated self-repair; self-initiated other-repair; other-initiated self-repair; and other-initiated other-repair. The examples below are quoted from Schegloff et al. (1977: 364–365).

(8) *Self-initiated self-repair*
N : She was giving me a:ll the people that - were go:ne this yea:r *I mean this - quarter* y' // know
J : Yeah

(9) *Self-initiated-other-repair:*
B : He had dis uh Mistuh W - whatever K - I can't think of his first name, *Watts* on, the one thet wrote // that piece
A : *Dan Watts.*

(10) *Other-initiated self-repair:*

Ken : Is Al here today?
Dan : Yeah
(2.0)
Roger : He is? hh eh heh
Dan : Well he *was.*

(11) *Other-initiated other-repair:*

B : Where didju play ba:sk//et baw
A : (The) *gy:m*
B : In the gy:*m*?
A : Yeah Like gum (h)p therapy. You know
B : oh::
A : half the group thet we had la:s term wz en we jus' playing around.
B : Uh - *fooling around*
A : Eh - yeah . . . .

In example (8) the interactant N produces the repairable *yea:r*, initiates the repair with the correction phrase *I mean*, and goes on to produce the repaired word *quarter.*

Example (9) involves word recovery. The current speaker, B, tries to recover the name of someone. He is unable to do so and subsequently initiates the repair with the stretch 'I can't think of his first name, Watts on, the one that wrote // that piece'. The repaired item is eventually produced by the other interactant — A. Here the current speaker self-initiated the repair but the actual repair was done/performed by the next speaker.

Example (10) is an instance of other-initiated self-repair. Here, Ken asks whether Al is here today. Dan says yes. Al is not here at the moment, though, thus making Dan's statement incorrect/untrue. Roger initiates the repair with a question and then voiced pauses. Dan eventually produces the repaired utterance — 'well he was'.

In Example (11), A produces the repairable 'we jus' playing around'. B then comes in with the repair-initiating signal 'Uh' and goes on to provide the repaired utterance — 'fooling around'.

Four extracts are drawn from my data to illustrate the four categories of repair discussed above.

(12) *Self-initiated self-repair*

DA : *Anka wɔn bɛboro Ofori Attah maame* (0.4) *papa?*

(Will they have beaten Ofori Attah's mother? father?)

In example (12), the repairable *maame* is produced by DA. He initiates the repair with a pause and goes on to perform the repair by providing the repaired item *papa.*

(13) *Self-initiated other-repair*

KD : *Enti sika no dɛɛ aban de aba.*
DA : *OO, sika no dɛɛ* ***saa akoa yi; oo, saa akoa yi osogya nii yi***
EF : ***Akyeampong!***
DA : *Akyeampɔn brɛ so na yɛde bae na wadi. Wadi sika no.*

KD : So the government has brought the money.
DA : Oh as for the money, this man oo that man, that soldier
EF : Akyeampong!
DA : It was brought during Akyeampong's regime but he's squandered it. He's squandered the money.

In the above extract DA initiates the repair by producing the repair-initiating signal/feature (i.e., *saa akoa yi; oo, saa akoa yi. Osogya nii yi.* He (DA), is however unable to provide the repaired item — *Akyeampong*; the repaired item is provided by EF. DA immediately rephrases his utterance, putting in the repaired item provided by EF.

(14) *Other-initiated self-repair*

AS : *Kofi de me nkra no brɛɛ mo?*
KG : **Aane.**
OW : *ɔde nkra bi bae? Kofi de nkra bi aba? =*
AG : = ***Oo daabi. ɔnfaa nkra biara mae.***

AS : Did Kofi bring you the message?
LG : Yes.
OW : Did he bring any message? Has Kofi brought any message?
KG : Oh no. He hasn't brought any message.

In the above example the repairable *Aane* is produced by KG. OW prompts/initiates the repair and KG (the producer of the repairable) comes in in a latch position to produce the repaired item *oo daabi* 'oh no'.

Here we see that like AS's utterance, OW's utterance acts as a next speaker selection technique. Thus the repair initiation by OW invites the next speaker KG to enter the conversation. The fact that his (KG's) utterance occurred in a latch position suggests that OW's utterances is a strong next speaker selection signal.

(15) *Other-initiated other-repair*

AB : *Ne nana nom nyinaa bɛyɛɛ ayie no ma ɛyɛɛ fɛ.*
KY : ***Daabi. ɔpanin no a ɔwɔ akwantuo mu no amma.***
AB : All her children attended her funeral to make it a grand one.
KY : No. The eldest child did not attend.

In example (15), AB makes an untrue statement that all of a deceased person's children attended her funeral. The next speaker KY comes in immediately to correct the assertion made. Here KY initiates and carries out the repair himself.

In the subsequent sections I discuss the various phonetic cues which signal repair. It is important to know in advance that these phonetic cues which signal repair are also produced by the same phonatory, articulatory etc. processes as the utterances themselves since they occur alongside and are interspersed with them (Local and Kelly 1986: 185).

5.1. Pausal phenomena and repair

As Aitchison (1976/81) has argued, it may at first sight seem quite paradoxical to investigate speech by studying non-speech. The idea, however, is not as irrelevant as it may seem. After all Jackson (1932) remarked that speech in which a hesitation pause does not occur is inferior speech, since, as was mentioned earlier, such speech may have been rehearsed beforehand or since the speaker may merely be stringing together a number of standard phrases he habitually repeats. Various types of pauses are used to signal repair in Akan conversations and among these are silence with a glottal closure, and hesitation/voiced pauses.

It ought to be noted that not every pause signals repair. In speech, speakers may pause to breath in or out. It is also possible for a current speaker to pause when interrupted by a next speaker. A pause may therefore be due to a biological or an interactional necessity (Henderson et al. 1965). In this paper, I concentrate on those pauses which are of interactional relevance. I begin by looking at holding pauses and how they are used to signal repair.

5.1.1. *Holding pauses and repair*

Local & Kelly (1986: 195) define a holding pause or a glottal hold as a pause in which a glottal closure is maintained through silence and is released at the beginning of the following word by the same speaker. In

the following examples from my data, a holding silence is indicated with the IPA notation for a glottal stop and a tie-bar is placed over the pause.

(16)

Anka wɔn bɛbro Ofori Attah maame (0.4) ***papa***?[1]
ʔaŋka wɔ̃ɔ̃ bɛbɹufoɹiat amã:mĩʔ (0.4)ʔɛ papa
(Will they have beaten Ofori Attah's mother? Father?)

(17)

Menkɔka nk̃yeɾ̃ɛ menkɔkra no.
mɪŋkɔkãɲtɛɹ'ɛʔ ʔ mĩŋkɔkɹanɔ̃
(I should go and tell I should to and bid her farewell)

In example (16), the speaker produces the repairable [ma:m̆ĩ] *maame* 'mother', pauses for 0.4 seconds and then produces the repaired item [ɛpapa] *papa* 'father'. Here we see that the glottal hold is uttered immediately after the vowel [ĩ] of [ma:mĩ] and just before the [ɛ] of [ɛpapa] is uttered. The holding pause has been considered in some detail by Local and Kelly (1986), where they argue that such pauses are deployed by turn-occupants to hold turns and are hence of interactional relevance. Specifically, they have argued that such pauses are deployed for turn-regulation and may also be relevant in repairing.

In example (17), the repairable is [kãɲtɛɹ'ɛ] *kakyerɛ* tell (show), i.e., inform, and the repaired item is [kɹanɷ] *kra no* 'to bid - her - farewell'. In this example we see the repairable and the repaired items coming from the same semantic area. Bidding farewell involves informing, that is, informing the recipient that you are leaving for another place. One phonetic feature common to the sound/syllable immediately preceding the glottal holds in their markedly short nature (in terms of physical duration). In most cases such sounds or syllables are spoken with 'creaky' voicing.

5.1.2. *Silence without a glottal closure*

Silence without a glottal closure may also initiate a repair. In such cases the final syllable preceding the silence is relatively lengthened. For example:

(18)

DA : *Akoa yi a na ɔyɛ ɔ kyeame yi* (1.8) *ɔdaso koraa yɛ*
akɷəjianɔjɛ tɕĩãmĩ̀:: dasɔkwɹaijɛ
(.)(1.8)
ɔkyeame (1.8) ***Ntiamoa! Kwasi*** *ɛnkrɔfoɔ no afa asaase no.*
tɕĩãmĩ ntiamɷa kwəsi ɛŋkɹɔfɷɔ nd̆fasa: sɪnɔ̃

DA : This man who was a chief's spokesman (1.8) He's still a chief's spokesman (1.8) Ntiamoa! (.) Kwasi! the people have confiscated the land.

KD : Aaa (Oh I see)

(19)

Sɛ wodii bɔne paa a (0.4) ***sɛ woyɛɛ wo biribi te sɛ abo a***

seudi:bɔnĩ pa:: (0.4) sɛ wuje: wubj ibjit ɪsabɷa:

If you sinned considerably, (0.4) If you behaved like a beast . . .

Example (18) is an instance of word recovery. The speaker (DA) tries to recover the repaired item *Ntiamoa* (name of a person) but when he gets to *ɔkyeame* [ɔtɕĩãmĩ::] 'chief's spokesman', he cannot readily recover that name so he pauses for 1.8 seconds.[2] He goes on to give extra information about the repairable, by saying *ɔda so koraa yɛ ɔkyeame* 'He's still a chief's spokesman', then pauses again before recovering the repairable. The last syllable preceding the silence is considerably lengthened. The diacritic (.) placed under the diacritic :: stands for an unusually lengthened sound/syllable.

In both examples (18) and (19) the syllable preceding the silence is considerably lengthened. The argument put forward so far should not be construed as implying that any prolongation of a phonic or syllabic item presupposes a repair. Rather, a repair may be initiated with phonic or syllabic prolongation. The extract below indicates a case where prolongation or lengthening of a phonic or syllabic item does not presuppose repair.

(20)

KD : *Asuomfoɔ deɛ anka yɛbɛnu mmɛ no nyinaa*

əsɥuomfɷɔ dɪɛ aŋka jebenũ mɛ nũ ɲiŋ̣a::

DA : *ha ha ha. Ampa o*

ampo:

KD : As for the Asuom people, they would have cut all the palm bunches. (nuts)

DA : (Laughs) . . It's true

In the above extract, KD lengthens his last syllable na :: but this does not lead to any repair. As already stated, linguists such as Local and Kelly (1986) have worked on the use of pauses as turn regulatory features. Specifically, they have argued that silence marked with glottal closure is projective of continuance of speech by the same speaker. This by implication suggests that such pauses are used to hold turns. They argue further that silent pauses marked by audible breathing is turn delimitative.

5.1.3. *Voiced pauses and repair*

It has been shown that voiced pauses, also called filled or hesitation pauses, account for between one-third and half of the total speaking time (Henderson et al. 1965). The relevance of voiced pauses in repair management and in conversation as a whole has been discussed by some psycholinguists. Clark and Clark (1977: *passim*), for instance, have remarked that the use of voiced and indeed silent pauses in conversation indicate that speakers have had to stop talking and think about what to say next. For them, therefore, voiced pauses perform a cognitive function — that of planning.

James (1972, 1973) remarks that particular interjections are selected by speakers to signal why they have had to stop. He argues that these interjections (which I think are more or less hesitation pauses) perform separate functions. The interjection 'ah' as in 'John would like — ah, carrots' performs a memory success function. Thus it shows that the speaker has just managed to recover the 'forgotten' word, the repairable or the trouble source.

'Oh' as in 'John would like — oh carrots' indicates that the speaker has stopped to select 'carrots' as just one of several possibilities he could have mentioned. 'Oh', therefore, performs a referent selection function.

Jefferson (1983) also makes a point about the voiced pause 'Uh' which she refers to as a conjunctional. Specifically she remarks that such a conjunctional might be 'weak' in terms of taking or holding speakership.

In this study I have found voiced pauses as strong in terms of projecting continuing speech from the same speaker. The extracts below will help explicate this point further.

(21)

AY : *Wosee ɛɛ nipa baako a ɔbae no no na waba aba aba yi?*

wɷsɪ: ə:: nĭpaba: kɔ̃nɷɔba: jɛ nɷ ɔnɷ nɷabä: bä: bəi

AB : Are you suggesting that the first person who was created has reincarnated and continues to do so?

(22)

DA : ***wɛ Ide progyɛt adeɛ yi ɛɛ Kwae progyɛt***

wɛ: pɪodzɛt ʔädi: ɛ::$_{(0.4)}$ kwaɪ pɪodzɛt

DA : World project, this thing, em Kwae project.

(23)

AB : *na minimum ayi ɛyɛ ahe mpo (1.0) ɛɛ (0.6)fɛɛse no na*
na .minimɔm ɛjiɛjɛ ahĩ mpo (1.0) ɛ::(0.6) fɛ:sɪ
wɔnse (1.2) na (1)
wɔmsi (1.2) nã (.)
woresetaate a (1.2)eet somtin (1.0) eet handred and
wɷ:sa: tɪa (1.2) e: tisʌmtĩ: (1.0) e: tənd nɛ::
ae tink eti seven.
aɪtĩŋk et sɛvn

KO : Mmm
m::

AB : What was the minimum this thing ee at first they said if one was starting (a job) it was eight something eight hundred and ee I think eighty seven.

It is clear from the above extracts that voiced pauses are repair-initiating signals. In example (21), AY utters the word *wose* [wɔsɪ:] 'you mean', makes a silent pause of 0.8 seconds, then makes the voiced pause [ɛ::], and pauses again before managing to recover the repaired item *nipa* [nĩpa] 'man/person'.

In extract (22) the voiced pause is preceded by a very common Akan 'correction phrase' *adeɛ yi* [adi:] 'this thing' before the repaired item *Kwae* [k waɪ] (name of town) is uttered. In this extract and other similar cases scrutinized in my data, therefore, one sees repair being initiated with a phonetic as well as a syntactic cue.

In example (23) the speaker is trying to recover the minimum wage of some workers. She begins with a 'rhetorical question', pauses, then produces a voiced pause, and then she goes on to, as it were, grope for the repaired item, manages to issue 'part' of it [e:ti] 'eighty', follows it with another correction phrase/lexical unit [sʌmtĩ] 'something' and finally manages to recover the second half of the repaired sequence — that is — 'seven' [sɛ:vĩ]. What is of interest here is the use of voiced pauses and the prolongation that accompanies them. In this particular extract also, the speaker code-mixes Akan and English. It is interesting to see how the English words have been Akanized (i.e., assimilated phonologically) and how the entire stretch fits into the general pattern of repair sequences involving non-code-mixing stretches.

The extracts above and other cases of a similar nature found in my data suggest that voiced pauses project continuance of speech by the same speaker and may also serve as repair-initiating signals. In Obeng (1987) I argued that such pauses may signal turn-holding.

5.2. Vowel/syllable lengthening and repair

A systematic scrutiny of my data points to the fact that speakers lengthen or prolong certain sounds or syllables during repair (mainly word recovery). The extracts below illustrate this.

(24)

BO : *Hwan na ɔka nokorɛ?*
ʍaĩn ɔk ã:: nɷkɷɹɛ
AY : ***Ayi saa Buda Buda yi; yɛfrɛ no sɛn?***
əji sa: buda buda ji jɛfɹɛŋõ sɛ̃ĩ
BO : ***Kɔmfuhyɔs*** nom no?
kɔmʃuɕɪɔs nɷm nõ
AY : Kɔmfuhyɔs
kɔmʃuɕɪɔs

BO : Who speaks :: truth
AY : This (one) that Buda Buda. What do you call him?
BO : Confucius?
AY : Confucius.

(25)

AY : *Anaa sɛ biribi a ɔfeel sɛ saa biribi wɔ tumi*
anã sebi:bi:: ä (0.4) ɔfi:sɛ sə:bib'i nu wotumĩ
‹› ‹›
Or anything:: which ( ) he thinks has power

In example (24) we have two instances of repair; the first involves BO's utterance and in this one vowel lengthening signals the repair. BO produces the stretch [ʍaĩ nɔ]; he prolongs the syllable [ka::] because he is unable to produce the next word readily. The prolongation co-occurs with a simultaneous falling pitch movement although the descent in pitch goes nowhere near the speaker's pitch range. The prolongation is then followed by a silent pause and then the repaired item *nokorɛ* [nɷkɷɹɛ] 'truth'. The second repair is the one initiated by AY and performed by BO (i.e., BO producing the repaired item Kɔmfuhyɔs 'Confucius').

In example (25), on producing *biribi* 'something', the speaker lengthens the last [i] before continuing. In fact the repair process does not end there because after producing [ä] 'which', he pauses for 0.4 seconds before continuing his utterance.

The repair in this case, therefore, is signalled by two phonetic cues, namely, vowel lengthening and silence. The loudness associated with the sound [i::] is marked with a 'swell' (involving a sudden increase in volume

followed by a sudden decrease in volume), notated as [〈〉]. The vowel [i::] is also markedly centralized and the pitch movement associated with it is falling although the descent gets nowhere near the bottom of the speaker's pitch range. The falling pitch movement is notated [◌̏].

5.3. Repetition/reduplication of syllabic or phonic elements

A careful and systematic examination of my data reveals that an entire syllable or parts of it may be repeated during repair operations, especially those involving word recovery. These may also involve a 'slip of the tongue' and consequently they have been treated by Psycholinguists as 'performance errors' rather than 'selection errors'. An example from Aitchison (1976: 217) is *The book by Chomsky and Challe*: in this example the 'ch-' of Chomsky is repeated after the word *and*. Thus instead of 'Chomsky and Halle' we have 'Chomsky and Challe'. The illustrative extract is quoted from my data to help explicate the claim made above.

(26)

DA : *Asuomhene sii fom kɔtɔɔ ntoma wɔ sotɔɔ sɛ*
əsɥuomfiɪ:si:fɔmkɔtɔ:ntɷmãwɔsɷtɔ:sɛ
watwi afa two. Watwi afa Kwaben hene so
wətɛɥiafatɛɥɷʔ ʔwətɛɥiafakwa:bi:fiĩ:sɷ
ɛde baa kurom ha. Nana,
edɪ bae: kɹom ha nãnã

EF : *Oo, na sɛ ɛno deɛ ɛwɔ hɔ.*

DA : *Gyae nea worekeka no koraa. Anka wokɔ dada da.*

DA : Asuom chief alighted (from a vehicle) and bought a piece of cloth from a store to show that he had snubbed him. He has snubbed Kwaben chief: and he came to this town. Nana,

EF : Oh well, that is possible.

DA : Stop what you're saying. You would have vanished/run away long ago.

In the above extract, instead of saying *watwi afa so* [wətɛɥiafasɷ] (he has snubbed him) the speaker says *watwi afa two* [wətɛɥiafatɛɥɷ]. Thus the voiceless labio-palatalised alveolopalatal affricate [tɛɥ] of *watwi* [wətɛɥi] is repeated in the production of *so* [sɷ]. The speaker realizes the error/repairable and subsequently ends the repairable with a glottal closure (which is itself projective of repair) and goes on to do the repair. Thus

he reshapes his utterance and replaces the repairable with the repaired item *so* [sɷ].

In the two extracts which follow, I demonstrate how parts of a sound or syllable are repeated during repair.

(27)

AY : *Na sɛ* ***ɔb ɔbosom*** *nyɛ adeɛ a ɛsɛ sɛ onipa kɔbu*
nã sɔbʔ(.)ʔɔbɷsɷm ɲã dɪä: sɛ se nĩp akobu
ntwerɛ wɔ n'anim
ntɛɥɹɛ wɔ nãnĩm

BO : *Enti seisei Sɛnea worekasa yi . . . .*

AY : You shouldn't bow before a god/A god shouldn't be worshipped

BO : So then, as you speak . . .

(28)

AY : *Enhia* [*sɛ wo woko wokoto* — *Nyankupɔn*
sɛwɷʔ ʔwɷkɷʔwɷkɷtɷʔ — ʔɲãɲkɷ̃p'ɔ̃
(0.8)
— Forte — Forte —

BO : *wokoto Nyankopɔn*]
— Piano — — Piano —

AY : You need not worship/kneel before God

BO : Worship God

(29)

KO : *Na me mempɛ sɛ mɛka akyerɛ obiara*
nãmĩ:mĩmpɛsɛmɛkãtɛɹɛobiä:

KO : I I didn't want to inform anyone

In example (27), the speaker signals the repair by producing the initial syllable [ɔ] and the first element [b] of the second syllable [bɷ] of the word *ɔbosom* [ɔbɷsɷm] 'god'. The repair here could be said to involve word recovery. The repaired item is *ɔbosom* but before it is uttered the speaker utters [ɔb] and follows it with silence accompanied by a simultaneous glottal closure. Thus we have [ʔɔbʔ(.)ʔɔbɷsɷm]. The main point being made here is that the repetition and the glottal closure are projective of continuing speech (here the production of the repaired item) by the current speaker, AY. In example (28), the current speaker, AY, produces

the syllable *wo* [wɷ], pauses for 0.8 seconds, repeats the *wo* syllable (this time together with another syllable *ko* [kɷ], pauses again and then manages to retrieve the other syllable of the repairable stretch *to* [tɷ]. Thus he finally manages to produce the stretch *wokoto* [wɷk ɷt ɷ] 'you bow' as a single constituent/unit.

A careful scrutiny of AY's 'within overlap' stretch (that is, his stretch of talk overlapped by BO's utterance) indicates that the silences were all marked with glottal holds. Moreover, the volume associated with his (AY's) utterance is Forte (markedly high). The volume associated with BO's utterance is, however, piano (relatively low) and this might suggest that repetition as well as silence accompanied with a glottal hold and forte volume are projective of continuance of speech from an interactant and are hence of interactional relevance as far as return holding is concerned.

In example (29), the speaker (KO) intends to produce the stretch *mempɛ* [*mɪmpɛ*] but before he does this he produces the syllable *me* [mĩ] 'I', and pauses before producing the entire stretch of utterance. The argument being put forward here is that the stretch [*mɪ*] together with the silent pause is initiating signals.

This form of repetition is sometimes classified as a hesitation pause, but I reserve the term hesitation pause for such stretches as [m:hm] [ə:] [o:] (items which in the strictest sense of syntax do not belong to any word class).

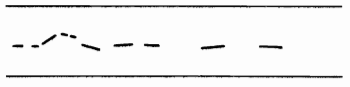
The important point being made in this subsection is that in embarking upon repair, speakers may begin by repeating parts of the repaired item.

5.4. Volume and repair

As far as volume is concerned, the repaired item (especially in word recovery) is marked by a relatively forte or fortissimo volume. The pitch associated with such repaired items is also relatively high. The phonic elements, that is, phonic elements that signal repair, are usually spoken with norm or piano volume. The extracts below will help explain this point.

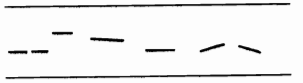
(30)

DA : *Akoa yi a na ɔyɛ ɔkyeame yi*
akɷəji a nɔ jɛ tɷĩãmi:



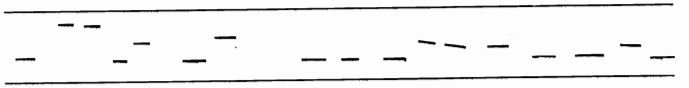
← piano →

ɔda so koraa yɛ ɔkyeame
ɔda sɷ kwɪɛ: jɛ tɷĩãmĩ



← norm →

Ntiamoa! Kwasi! ɛnkrofoɔ no afa asaase no
ntiamɷa kwəsi ɛŋkɪɔfɷɔ nãfasɗ:sɪnõ

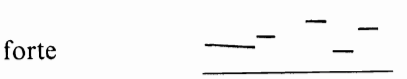


— forte ——fortissimo

DA : This man who was a chief's spokesman — He's still a chief's spokesman. Ntiamoa! Kwasi! The people have confiscated the land.

(31)

Anka wɔn bɛboro Ofori Attah maame papa
mã:mĩʔ ʔɛpapa
> forte



forte

Will they have beaten Ofori Attah's mother? father?

In example (30), the entire stretch of utterance from Akoa yi to *ɔkyeame* is a repair-initiating signal. We see that the stretch [akɷəjianɔjɛtɷĩãmĩ:] is marked by the speaker's norm volume. The utterance which follows that immediately (i.e., [ɔdasɷkwɪɛ:jɛtɷĩãmĩ:]) is, however, marked by piano volume.

The pitch height associated with the utterance mentioned is also relatively low. The repaired items are *Ntiamoa* and *Kwasi*. *Ntiamoa* [ntiamɷa] is marked with forte volume and Kwasi [kwəsi] with even greater volume (fortissimo). This suggests that in displaying memory success speakers deploy such phonetic cues as forte or fortissimo volume and raised pitch. Thus forte or fortissimo deployed singly or conjointly with raised pitch is characteristic of success at repairing.

In example (31) the repaired unit [ɛpapa] 'father' co-occurs with a relatively greater volume than [mã:mĩ] 'mother'.

I also pointed out in the previous section that forte volume is projective of continuance of speech by a current speaker and is therefore relevant to turn-holding in particular and turn-taking in general.

6. Concluding comments

In this paper, I have demonstrated that due to the properties of interaction and to the fact that few, if any, human beings manage to equate their communicative competence with their linguistic performance, repair becomes an inevitable facet of human conversation.

I have also demonstrated that conversational participants deploy, and orient to, various phonetic cues during repair management.

This study can on the one hand be said to have extended phonetics to dealing with conversational material and thus answered the call by Firth (1935) to linguists to study conversation since it is with conversation that 'we shall find the key to a better understanding of what language really is and how it works'.

On the other hand it could be said to have added a phonetic level of analysis to Conversational Analysis by bringing out interactants' behavior (deployment and orientations) to phonetic cues.

The close attention I pay to phonetic details also answers the call by Pike (1943) to phonologists to make a close observation and registration of phonetic details since that might yield insight into certain interactional and phonological issues. In fact I have demonstrated that close and systematic attention to phonetic details yields valuable insight into certain interactional categories, namely repair and turn-holding, and this suggests that considerable gains can be made if techniques in phonetics are employed in dealing with conversational material.

There is close similarity between this work on Akan and the work done by Local and Kelly (1986) on English with regard to the phonetic resources identified as repair-initiating signals, and this requires further investigation.

I must emphasize that the phenomena I have presented in this paper are just the tip of an iceberg and that further studies need to be done to show the close correlation between phonetics and conversational analysis.

Notes

1. Both the repairable — *maame* 'mother' — and the repaired item — *papa* 'father' — belong to the same sense relations or belong to the same semantic field — that of parenthood. Words which belong to the same semantic and sometimes lexical class are often substituted for one another.
2. A pause of 1.8 seconds is considered quite considerable in my data. In work done by Gail Jefferson (1988), she observes that 1.0 second is the 'standard maximum' duration in the data she worked on.

Glossary

Conversational and phonetic notations

<	increasing loudness
>	decreasing loudness
ʔ‿ʔ	glottal hold
⸨	overlap initiation
⸩	overlap ending
=	overlap in latch position (i.e., Next speaker's utterance begins immediately current speaker's utterance ends).

Where ɔ = any back vowel

ɔ̈	—	centralised
ɔ̃	—	nasalised
ɔː	—	very prolonged/lengthened
ɔ̆	—	short duration

References

Aitchison, J. (1976). *The Articulate Mammal. An Introduction to Psycholinguistics.* London: Hutchinson.

Bolinger, D.L. (1953). The life and death of words. *American Scholar* 22: 323–335.

Butterworth, B. (1975/1978). Hesitation and semantic planning in speech. *Journal of Psychological Research* 1: 75–87.

Clark, H.H. and Clark, E.V. (1977). *Psychology and Language: An Introduction to Psycholinguistics.* New York: Harcourt Brace Jovanovich.

Du Bois, J.E. (1974). Syntax in mid-sentence. In *Berkeley Studies in Syntax and Semantics* Vol. 1. Berkeley, CA: Institute of Human Learning and Department of Linguistics, University of California.

Firth, J.R. (1935). The technique of semantics. In *Papers in Linguistics 1934–1951.* Oxford: Oxford University Press.

Henderson, A, Goldman-Eisler, F. and Sharberk, A. (1965). Temporal patterns of cognitive activity on breath-control in speech. *Language* 8: 236–242.

Hockett, C.F. (1967). Where the tongue slips, there slip I. *To Honour Roman Jakobson,* 910–936. The Hague: Mouton.

Hymes, D. (ed.) (1964). *Language in Culture and Society.* New York: Harper & Row.

Jackson, H.J. (1932). *Selected Writings* Vol. 11. London: Hodder & Stoughton.
James, D. (1972). Some aspects of the syntax and semantics of interjections. In *Papers from the 8th Regional Meeting, Chicago Linguistics Society,* 162–172. Chicago, IL: Chicago Linguistics Society.
— (1973). Another look at, say, some grammatical constraints on oh, interjections and hesitations. In *Papers from the 9th Regional Meeting, Chicago Linguistics Society,* 242–225. New York: Academic Press.
Jefferson, G. (1983). On a failed hypothesis: 'Conjunctionals' as overlap vulnerable. In *Tilburg Papers in Language and Literature*. University of Tilburg, The Netherlands.
— (1988). Preliminary notes on a possible metric which provides for a 'standard maximum' silence of approximately one second in conversation. In *Conversation,* D. Roger and P. Bull (eds.). Clevedon, UK: Multilingual Matters.
Levinson, S. (1984). *Pragmatics*. Cambridge: Cambridge University Press.
Local, J.K. and Kelly, J. (1986). Projection and silences: Notes on phonetic and conversational structure. *Human Studies* 9: 185–204.
Obeng, S.G. (1987). Conversational strategies: Towards a phonological description of projection in Akyem-Twi. Unpublished thesis, Ph.D. University of York, UK.
Parsons, T. (1937). *The Structure of Social Action*. Glencoe, IL: Free Press.
Pike, K.L. (1943). *Phonetics*. Michigan: University of Michigan.
Schegloff, E.A., Sacks, H. and Jefferson, G. (1977). The preference for self correction in the organization of repair in conversation. *Language* 53: 361–382.
— (1978). The relevance of repair to syntax for conversation. In *Discourse and Syntax,* T. Givon (ed.), 1979: 261–288. New York: Academic Press.
Taylor, I. (1969). Content and structure in sentence production. *Journal of Verbal Learning and Verbal Behavior* 8: 170–175.

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Leaving telephone answering machine messages: Who's afraid of speaking to machines?[1]

SILVIA DINGWALL

Abstract

The aim of this paper is to examine some of the special characteristics of telephone answering machine messages (TAMMs) as 'discourse types'. First an attempt is made to distinguish 'discourse types' from 'text types', 'genres', and 'registers'. Then letters, telephone conversations and TAMMs are compared along several dimensions which serve to show similarities and differences between the three types according to their manner of production and processing. TAMMs appear to share characteristics of both letters and telephone conversations. This is reflected in the language used in leaving messages on answering machines, samples of which are included from data collected in Switzerland. It remains to be seen to what extent TAMMs evolve their own conventional means of expression or adopt conventions from letter-writing or telephone conversations.

1. Introduction

New means of communication not only allow us extra communicative freedom, but also place new demands on our communicative skills. Most adults today use telephones routinely. Observing a child learning to answer the phone (Holmes, 1981), however, shows just how much most of us take our telephoning skills for granted. So too does watching a comic scene from an old film (e.g., Karl Valentin) which plays on the difficulties of using a telephone for the first time. The humour appears rather dated as the telephone is no longer a new or uncommon form of communication. That there are now culture-specific conventions for talking on the telephone has been demonstrated by Godard (1977), Schegloff (1972 [1968]), Schegloff and Sacks (1973) and Schegloff (1979) among others. These conventions help us to deal with some of the constraints telephone conversations place on communication in comparison with face-to-face interaction.

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