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On the contextualizing function of speech rhythm in conversation:

Question-answer sequences

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1. Background

The background for this preliminary report on the contextualizing function of rhythm in conversation¹ is Erickson/Shultz's *The Counselor as Gatekeeper* (1982), in which the authors claim that conversationalists, in particular counselors and their student advisees, synchronize their verbal and non-verbal behaviour during interviews such that an over-all pattern of rhythm is established and maintained through time. This rhythmic pattern, they state, is constituted by the even spacing in time of the speaker's *points of emphasis* in speech and in body motion, and is supported by kinesic and verbal backchanneling activity on the part of the listener. Erickson/Schultz are concerned to show that when this rhythmic framework breaks down or even 'wobbles,' the result is an interactional 'incident,' or in their terminology an uncomfortable moment with varying degrees of gravity. They point to four types of rhythmic instability or 'arhythmia' and remark that the two most serious kinds — mutual rhythmic interference and mutual rhythmic opposition — are most frequently found when student and counselor come from different ethnic backgrounds.

Our approach to rhythm in speech belongs clearly to this tradition in that we too would view rhythm as one of what Cook-Gumperz/Gumperz (1976) have called *contextualization cues*, these being vocal or non-vocal effects which signal and in a sense constitute the context in which the current utterance ('what comes now') should be interpreted, or which

foreshadow an upcoming change in context relevant for the interpretation of 'what comes next' (cf. also Auer 1986). However, there are certain respects in which we feel that Erickson/Shultz's work is in need of clarification and indeed extension. For instance: (i) What counts as a beat? (ii) How do we judge the regularity of beats? (iii) What exactly can and does rhythm contextualize in verbal interaction? In this paper we shall propose a set of answers to (i) and (ii) as preliminaries to our major concern, question (iii), which we will treat with respect to question-answer sequences in everyday conversation.

1.1 *What counts as a beat?*

According to Erickson/Shultz interactional rhythm is established by both verbal and non-verbal, i.e. non-vocal, *points of emphasis*: specifically, by so-called 'stressed tonal nuclei' (words or syllables marked by a shift in pitch and an increase in loudness) in speech, and by gesture (points of extension or flexion) and shifts in posture in body motion (1982: 75). However, their detailed discussion of rhythm in an actual interview suggests that when speech and kinesic points of emphasis do not coincide exactly in time, it is the *vocal* cues which have priority in marking the underlying rhythm (1982: 92-93). The same discussion also implies that a shift in loudness without a co-occurring shift in pitch is sufficient on its own to constitute a pulse in the rhythm. From this it appears that simple stressed syllables (as opposed to pitch accents or intonational nuclei) are sufficient for the constitution of rhythm, and that kinesic events are not essential (indeed must sometimes be overlooked) in the establishment of interactional rhythm. We shall therefore concentrate here on the rhythms of speech, which, we hypothesize, stressed syllables and under certain restricted conditions 'silent' stresses are sufficient to create and sustain.

Our experience with the speech rhythm of everyday conversation, however, suggests that in contrast to, say, verse, not every stressed syllable in speech need constitute a beat in the over-all rhythmic frame. Consider, for instance, the following example from a BBC radio phone-in:

G: I think when you've got a nice name like Richard why they call you Dick I'll never know

According to the auditory criteria for stress advocated in descriptive English phonetics (greater relative length, greater relative loudness and/or

higher relative pitch of the syllable in question), the stressed syllables in this passage as uttered by G are: *got*, *name*, *Richard*, *why*, *Dick* and *know* (represented in the following with raised dots):

G: I think when you've °got a nice °name like °Richard °why they call you °Dick I'll never °know

Yet simple tapping along with the audio tape of this passage will show that it is only *got*, *Richard*, and *Dick* which are evenly spaced in time. Any attempt to try to work in *name*, *why* and *know* throws the rhythm off and produces a disjointed effect which does not reflect the general auditory impression of smoothness and regularity. We conclude therefore that stress is a necessary but not always sufficient condition for establishing the beat of interactional speech rhythm. In order to express this distinction, we propose to use lefthand slashes in front of stressed syllables which constitute rhythmic beats. The regularity of the beats in time are represented by lining up successive lefthand slashes underneath one another on the page. Right-hand slashes are used quasi-iconically as an indication of the relative duration of the interval between the rhythmic beats (to be referred to as *cadence* in the following). Using these conventions the rhythm of the above passage could be represented as:

G: I think when you've
/got a nice °name like /
/Richard °why they call you /
/Dick I'll never °know

Yet there are times when stress understood as an audible effect associated with a syllable does not appear to be necessary for a rhythmic beat. We refer here to the phenomenon of so-called *silent stress* described by Abercrombie (1964, 1971) and others. According to Abercrombie a silent stress is "a pause which fills a gap which otherwise would be filled by a stressed syllable" (1971: 148). This view necessitates a definition of *stress* as articulatory gesture, something which can be silent and which as listeners we perceive kinesthetically, according to Abercrombie. However, not every pause qualifies as one of Abercrombie's silent stresses, but only those which coincide with "a beat, according to the timing established" (1971: 148).

Our view of silent stress is more restricted than that of Abercrombie's in two ways. First, in contrast to many of his examples, where only one

audible stressed syllable precedes the silent stress, we would claim that a given timing cannot be established until at least two beats have occurred. These two beats are minimally necessary to establish an interval in time; only then can a listener form the expectation that another regular beat will follow.

Second, given the view of speech rhythm adopted here, what Abercrombie calls a 'silent stress' need not always figure as a silent beat in conversational rhythm. For instance in *Boys, stop here*, where Abercrombie claims that the silent stress is obligatory in order to obtain an imperative reading (1971: 50), we would say that the rhythm in conversation might be:

/boys /
/ ^ /
/stop /
/here

but that it might just as well be:

/boys — /
/stop °here

(where the dash represents a 'pause' which does not coincide with a beat) or:

/boys — °stop/
/here

In our view a 'silent stress' only becomes a silent beat if it helps constitute or maintain an over-all rhythmic pattern. In the following we shall adopt Abercrombie's caret but restrict its use to silent beats.

1.2 How do we judge the regularity of beats?

As will have become obvious by now, our view of speech rhythm depends crucially upon the concept of temporal regularity. The beats which constitute speech rhythm are such by virtue of their even spacing in time. This is of course the principle of *isochrony*, about which there has been considerable debate in the past years. At the center of the controversy are the issues of whether 'prose' (as opposed to verse) is isochronous at all and if so, how this isochrony should be determined.

As for the first issue, Pike (1945), for instance, claims that the rhythmic units of English speech "follow on one another in such a way that the lapse

of time between the beginning of their prominent syllables is somewhat uniform" (1945: 34). But Classe (1939), upon careful experimental investigation, concludes that the number of subsidiary stresses, the number of unstressed syllables and the number/type of syntactic boundaries must be similar in the intervals to be compared in order for there to be any verifiable isochrony (1939: 85ff). Given the view of rhythmic beat and rhythmic cadence adopted here, however, this aspect of the isochrony debate is less directly relevant for our purposes than the second issue, how isochronous intervals should be determined.

A number of attempts have been made in the past to *measure* the intervals between the stressed syllables of speech based on acoustic analysis, but most of these have failed to find absolute isochrony, no matter whether the measuring point has been taken to be the onset of the stressed syllable, including any preceding consonants, or the onset of the vowel in the stressed syllable (cf. e.g. Shen/Peterson 1964; Bolinger 1965; Lehiste 1973).² Only the relatively recent discovery of a so-called *perceptual center*, whose location varies depending upon the phonetic nature of the syllable onset in question (Fowler 1979; Morton *et al.* 1976), has brought hope of an advance in measuring techniques for isochrony. But such techniques are applicable only to data produced in the laboratory; the prospects of being able to extend them to the analysis of everyday conversation are at the moment dim indeed.

Even if it were possible to measure parts of the acoustic signal for isochrony, however, it would still be necessary to establish the limits within which variation is tolerated and beyond which anisochrony begins. And these limits are psychoperceptual in nature. Indeed as far as interactional rhythm is concerned, the only meaningful notion of isochrony is a perceptual one. Furthermore, although the acoustic correlates of our perception of isochronous vs. anisochronous intervals could conceivably be worked out in psychoacoustic experimentation, our perception of speech rhythm is undoubtedly subject to other, less easily measurable factors as well. Ultimately, we believe, it is the *perception* of rhythmic isochrony which should be accorded more credibility than measurably equal or quasi-equal acoustic intervals.

The technique which has proved most useful so far in experiments dealing with the perception of speech rhythm is tapping or some similar motor activity (cf. Allen 1972). Indeed it appears to be the case that the auditory impression of rhythmic regularity is easier to determine and verify

if it is 'translated' into motor rhythm. It is this technique, used by several judges working independently, which we have relied on in our research so far.

1.3 *What can and does rhythm contextualize in verbal interaction?*

In contrast to Erickson/Shultz, who imply that a rhythmic framework once established for a given interaction or interactional topic, remains constant except in moments where 'arhythmia' signals uncomfortableness, we have observed greater variation in the alternation of rhythmic and arhythmic passages in everyday conversation, as well as greater variation in tempo. Nor does this variation necessarily always cue uncomfortableness. The fact that Erickson/Shultz seem particularly keyed in to rhythm vs. 'arhythmia' and comfortableness vs. uncomfortableness may result from the restricted nature of their data, student-counselor interviews, and/or from the restricted type of speech activity, question-answer, found in this kind of data.

However, the rhythmic variation we encounter in conversation does not appear to be wholly random either. In fact, we believe that changes in rhythm and tempo can be related to some aspect of the sequential structure or to some speech-activity dimension of the interaction at hand, i.e. we believe that they can be expressed in conversation- or discourse-analytic terms.

2. The study: A preliminary report

To substantiate our claim, we propose to start with the same speech activity, question-answer, but use material from a more varied data base: audio tapes of radio phone-in programmes and face-to-face family chats in Britain and the United States. In contrast to Erickson/Shultz, who deal only with 'rhythm' and 'arhythmia' as contextualizing factors, we shall distinguish *speech rhythm*, a pattern of regularly recurring beats as described in §1.1 above, and *speech tempo*, deriving from the duration of the cadence in a rhythmic structure.

For the analysis of speech rhythm at least three aspects are relevant: (a) the degree of isochrony; (b) the extent of overlap between prosodically stressed syllables and rhythmic beats; and (c) the number of unstressed syllables per rhythmic interval. In this preliminary report, however, we shall concentrate primarily on isochrony.

2.1 *Rhythmic configurations in question-answer sequences*

In this section we shall demonstrate the range of rhythmic configuration in question-answer sequences by looking at a selection of actual occurrences in everyday conversation. Two points must be clarified, however, before we begin. First, our interpretation of what qualifies as a question has been rather broad, in the sense that we have not restricted our attention to utterances with grammatical markers of interrogation. Instead we have been guided by the conversational analytic principle that something counts as a first pair-part, e.g. here as a 'question,' if it makes a matched second pair-part, e.g. a response or 'answer,' *conditionally relevant* (cf. Schegloff 1972 for a discussion of this notion). In the first stage of our investigation we have, however, limited ourselves to functionally simple question-answer sequences and excluded e.g. questions and answers which occur in greetings or correction/repair sequences.³

Second, we shall be examining primarily complete rhythmic configurations, i.e. structures which consist of at least three beats. (Two are necessary to establish a cadence; the third, if it is isochronous, produces an identical cadence, whereupon the structure stands). In verbal interaction, however, these three beats need not be all provided by one single participant. Instead a rhythmic structure may come about through the mutual collaboration of two or more participants.

a. *Immediate isochronous onset*

- (i) DJ: /now then — are you a /
/married Sue /
S: /yes I am
- (ii) DJ: did you get °married with ə:
/all sorts of /
/flowers in your /
/hair
S: no I /
/didn't
DJ: you /
/didn't

These excerpts illustrate two common varieties of a rhythmic configuration characterized by the fact that the answerer's first stress (=onset) coincides with the very next beat following completion of the first speaker's question

(to be referred to henceforth as the beat after the *transition relevance place*⁴). In (ii) the DJ has set up a minimal rhythmic structure by himself with his three beats on *all*, *flowers* and *hair* and Sue's response is timed to fit into this pattern: her first stress on *didn't* falls where we would expect the next beat after *hair* to come.⁵ In (i) the DJ has only provided two of the necessary three beats with his question and Sue provides the third with the isochronous onset of her answer. In this case the DJ and Sue collaborate in *establishing* a rhythmic frame, whereas in (ii) they collaborate in *maintaining* it. In both cases the result is an integrated, coherent rhythmic structure which attests to the cooperative efforts (and success) of the interactants.

Since it is this pattern which occurs most frequently in our data, and since it demonstrably calls forth no special comment or interpretation by participants when it occurs, we conclude that it is in an important sense the 'unmarked' form for simple question-answer sequences. This status is attested to by another set of examples, which the following illustrates:

- (iii) DJ: /welcome to the /
 /programme what d'you /
 /do in life /
 /Judith /
 J: /em /
 /well I work for /
 /Boots the /
 /Chemist /

Judith's answer here is timed so as to match the rhythm of the DJ's question but what maintains the rhythm on the first beat after the transition relevance place (TRP) is a so-called 'hesitation noise.' Actually Judith is not hesitating in the sense that the rhythm becomes shaky or is thrown off; musically speaking this is a *rest*. This is then similar to the 'silent beat' phenomenon discussed above, only here the pause is vocalized. Note that to the ear this rhythmic structure is just as well-formed as that in (i) or (ii). We conclude that fillers and vocalizations are not alone indicative of a conversational 'hitch' or, as has been sometimes claimed, of a 'dispreferred' second pair-part.⁶ Instead whether or not they are integrated into a larger rhythmic structure seems to affect their conversational function significantly. The fact that answerers use vocalizations and fillers to put the rhythm of the question 'on hold' so to speak, until the requisite lexical items are available, supports the claim that type (a) is in some sense a preferred option.

b. *Immediate isochronous onset followed by rhythmic disintegration*

In contrast to the sequences above, in which the isochronous pattern continues after the onset and the over-all impression is one of rhythmic smoothness,⁷ type (b) has initial synchronization which disintegrates thereafter:

- (iv) DJ: /tell us what you /
 /do in life /
 /Vera /
 V: /eh /
 /well I'm °just e:m you °know a °wedded --
 /housewife/
 / put it/
 /that way

In this example Vera initially keeps the DJ's beat with her stresses on *eh* and *well*, but the rhythm begins to break down with the irregular stresses on *just*, *know* and *wedded* and finally disintegrates altogether with the ensuing pause.⁸

This example makes two points clear. First it corroborates the claim that type (a), with isochronous onset and subsequent 'integrative' rhythm, is the preferred option for simple question-answer sequences. A rhythmic structure which is collaboratively produced will obviously be most vulnerable at its transitions, the TRPs. Assuming that participants are concerned to establish and maintain such structures in question-answer sequences then they will be especially attuned to ensuring rhythmic continuity at these seams. Given this assumption Vera's use of vocalizations and fillers to maintain the beat long enough for a smooth rhythmic transition make sense, even though her word search difficulties ultimately lead to rhythmic breakdown.

Second, this example demonstrates that rhythmic breakdown or disintegration in question-answer sequences is a potentially serious matter, one that may call for some *accounting*, in Garfinkel's words. In the case at hand, the DJ proceeds at great length, subsequent to Vera's answer, to disassociate himself from the denigratory "just housewife" point of view. This shows, we believe, that he has interpreted Vera's answer, cued in part by her rhythmic difficulties, as an indication that her face has in some way been threatened by the incident. If so, then rhythm, in particular rhythmic disintegration, can be seen as contextualizing an uncomfortable moment in this interactive sequence.

c. *Delayed isochronous onset*

- (v) A: I'm so /happy that I /
 /stopped /
 N: /when did you quit /
 A: / /
 /uhm — when /
 /Robert and I met each other we
 °quit together — we °both °smoked and we decided we'd
 °quit together

In this example the rhythmic structure begun by A and confirmed by N in his question is picked up again by A in her answer — but with a substantial delay. In fact this configuration might appear to be a rhythmic breakdown if it were not for the fact that A's onset *uhm* coincides precisely with the beat, provided we assume that a silent beat intervenes. In other words, she comes in 'on time' but one beat later.

Note that there is no demonstrable uncomfortableness in this situation, to which interactants orient. In fact, when questioned later, one participant accounted for the delay as *time-out for calculation*, e.g. the need to reckon dates or periods of time. As far as over-all rhythm is concerned, a delay of one beat, provided the pattern continues afterwards, is quite different in effect from a rhythmic breakdown or rhythmic disintegration, although it may also call for some accounting.

Rhythmic delays of two or more beats are of course conceivable and indeed sometimes encountered. Consider, for instance:

- (vi) S: /why do they have to put /
 /colouring — into /
 /tins of /
 /pet food /
 / /
 / /
 DJ: / in /
 /order to per= /
 /=suade the /
 /cat- the /
 /animal to /
 /eat it I sup= /
 /=pose

In this case enough time elapses for three rhythmic beats to occur before the DJ comes in on the fourth with his onset. However, in order to claim a contextualizing function here, we would have to assume that conversationalists are able to mark time as stringently as orchestra conductors do during long silences. We suspect that this may be overestimating the rhythmic capabilities of ordinary human beings and that the effect of such a delay in rhythmic onset — even if followed by subsequent isochrony — may come closer to the effect produced by type (d) below.

Delays of more than three rhythmic beats are also encountered in our data: in one of the cases at hand the first speaker is moved to reformulate the question (e.g. *I mean...*), in another, to initiate an availability check (e.g. *hello, can you hear me*). These seem to be indications that the temporal limits within which some second should occur following the question have been overextended. Thus the slot which a question sets up in conversation should be thought of as having a 'maximal' duration, and indeed one that is marked in rhythmic beats, we would argue, and not in absolute time units (centiseconds, seconds, etc.).⁹ Depending on the tempo and the speech activity which are relevant at a given moment in interaction, intervals of differing duration may be appropriate or expected. It thus makes better sense to reckon transition time in terms of rhythmic beats rather than absolute units of measurement.

d. *Anisochronous onset followed by new rhythm*

In this type of rhythmic configuration the answerer's onset comes either too early or too late to coincide with the next beat or with some later beat after the TRP. For example:

- (vii) DJ: /whereabouts in /
 /Bolton do you /
 /work /
 G: °eh I /don't I'm unem= /
 /=ployed — well a /
 /student — /
 /part-time
 DJ: a /
 student — °uh
 /part-time unem= /
 /=ployed /
 G: /yeah /

DJ: °fine — o°kay —
 /how long you been unem=/
 /=ployed
 G:
 °uh (1.5) °eight °month

In the first sequence here the onset of G's answer *eh* comes well after the beat which is established by the DJ's isochronous *whereabouts*, *Bolton* and *work*. The effect it has is to temporarily throw the rhythm off and produce an impression of disjointedness. However, G quickly establishes a new rhythm by timing his next stresses on *don't*, *unemployed*, *student* and *part-time* regularly. The rhythmic instability at this point is therefore only temporary but it is enough to cause uncertainty on the part of the DJ, as evidenced by the rhythm of his follow-up.

Now it can be argued here, we believe, that the anisochrony of G's onset 'tells' the difficulty he experiences in responding to the DJ's question and what it presupposes. This difficulty may come in part from the stigma which often attaches in our society to unemployment. If so, then G's anisochrony contextualizes the fact that his face is threatened by the 'admission' he must make. That the situation is indeed perceived as a threatening one by G is demonstrated, we believe, by the way his subsequent contributions attempt to steer the conversation away from his unemployment and to his status as student:

(vii)' DJ: mhm — as long as that
 G: yes
 DJ: goodness gracious when was that then (.) tell me (.) very quickly I can't remember
 G: well I'm taking an A level course actually
 DJ: ah:: (.) sensible man (.) so while you're unemployed y-you're trying to get yourself an A level are you
 G: yeah
 DJ: ah great well that sounds sensible (.)

e. Anisochronous onset followed by arhythmia

This category is exemplified by G's answer to the DJ's second question (*how long you been unemployed*) in extract (vii) above. Note that the DJ provides two isochronous beats in this question but that G's onset *uh* is grossly delayed and off beat. A pause of approximately 1.5 seconds ensues, but since the rhythm has already been thrown off by *uh* it is impossible to mark silent beats. Furthermore, the next two stresses on *eight* and *month*

do not succeed in establishing a new rhythm. G's anisochronous onset then ultimately turns into full arhythmia.

In contrast to a sequence like (i) above, in which immediate isochronous onset and following integrative rhythm go along with a maximum of smoothness and cooperation, (vii) is at the opposite end of the scale with its anisochrony and arhythmia. A sequence like (v) is intermediate on the scale, in that a gap in the rhythmic pattern occurs but is ultimately closed again.

2.2 Some contextualizing functions

The picture which has developed from our study so far is more complex than Erickson/Shulz imply on two accounts: first, the variety of possible rhythmicizations is greater. This is partly due to a new definition of rhythmic beat and rhythmic cadence, but also to the inclusion of silent beats. And when tempo modifications are taken into account, the variety will of course increase. Second, what rhythm contextualizes has been shown to be more than just some degree of comfortableness. We have seen two instances of face threats being contextualized (iv) and (vii), but also an instance of a time-out for calculation (v). Since arhythmia is found in the former set and delayed rhythm in the latter, it is tempting to conclude that these specific rhythmic configurations contextualize precisely these meanings. However, this would be too deterministic a view, one which would reduce the role of rhythm to a secondary, realizational plane. Our claim is more subtle in that it leaves room for negotiation and ultimately places a heavier communicative burden on rhythm.

2.2.1 Face threats

Take, for instance, the category of face threats. These are to an extent 'predetermined' by the social and cultural values prevalent in a given community at some particular moment in time. We might therefore say that as an adult of working age in twentieth-century Western society, to be unemployed is potentially a threat to one's positive image. But what is a potential face threat by virtue of its content need not be actualized in verbal interaction, — and one of the actualizing factors, we claim, is rhythm. Compare, for instance, excerpts (iv) and (vii) above with the following:

DJ: and /
 /what's your mum'n dad's / [early]
 /name
 S: hh /
 /Pat and John
 /Walker

The rhythmic continuity of Sharon's answer to the DJ's *what's your mum and dad's name* cues the fact that no reckoning is necessary in this case. But compare the effect which the following rhythmicization would have:

(x) DJ: /what's your mum 'n dad's/
 /name /
 S: / ^ /
 /hhh °Pat and °John °Walker

If such a configuration — with delayed anisochronous onset and subsequent arhythmia — were to be used, it would call for some accounting and one of the accounts available would be that S needs time to reckon/think.

Thus just as smooth rhythm can be used to 'neutralize' a potential face threat, so delayed rhythm can be used as a display of mental calculation. This is presumably its function in the following:

(xi) E: /what is this a= /
 /=partment /
 /like
 Mi: oh the /
 /place I'll be moving /
 /into
 E: /no I mean the/ [early]
 /place °he's — in
 [
 Mi: oh/
 /his
 E: /yeah /
 Mi: / ^ it's /
 /big

This exchange is somewhat complex in that there is a shift in rhythm and tempo in E's response to Mi's repair initiator. The shift is brought

about by the fact that E's stress on *no* anticipates the prior beat and her stress on *place* forms a new beat. Note that Mi quickly adapts to this new rhythm and tempo and thereby ratifies it. What is relevant to present purposes, however, is that after the referential problem has been cleared up, Mi 'misses' the chance to time her answer to E's question with immediate isochronous onset, i.e. coincident with the next beat after *yeah*. Instead she allows a noticeable silent beat to go by before answering. Since E's question involves no potential face threat, we must assume that this is a time-out for calculation. The question then becomes in retrospect 'a question which requires some reckoning' and Mi's meaning by extension 'I need time to find a proper evaluative term.' When her choice falls on something as non-committal as *big*, we reinterpret her calculation time-out as ironic and implicative, a meaning corroborated by the low rising intonation. In this case delayed rhythm has been used to cue a display of mental calculation although objectively speaking none was called for.

2.3 Conclusions

We conclude then that the rhythmic configuration of a simple question-answer sequence can contextualize a number of things, among them face threats and calculation time-outs. We have attempted to show, however, that the relation between content and rhythmic form is not fixed but open to conscious or unconscious exploitation by the speaker. It is also open to multiple interpretation by the listener, as becomes clear from excerpt (vii). Were there a fixed interpretation for an anisochronous or arhythmic answer to a *how long*-question, then we might be tempted to view G's anisochrony as reckoning time. Yet given the other contextual cues present, the more likely account is that it actualizes a face threat.

NOTES

1. This research is part of a larger project "Prosodic Contextualization" (Au 72/3-1) sponsored by the Deutsche Forschungsgemeinschaft.
2. For more recent experimental work on isochrony in English see Jassem *et al.* (1984).
3. According to our observations, correction sequences have special rhythmic configurations of their own. We shall return to them at a later stage of our research. See, however, Auer (1990) for a discussion of rhythm in conversational closings.

4. We are using this term in the sense of Sacks/Schegloff/Jefferson (1974) to refer to a point of possible speaker transition; for more discussion, see Levinson 1983: 297ff.
5. Likewise the DJ times his follow-up to Sue's answer so as to coincide with the beat.
6. A term used by Pomerantz (1984) and others to denote those alternatives following the first-pair part of an adjacency pair which are marked in the sense that their structure is more complex (e.g. accompanied by delay and accounting components) than that of unmarked or *preferred* seconds. See Levinson 1983: 307ff and 332ff for a summary and discussion.
7. In type (a) the isochrony following the onset sometimes undergoes a modification of tempo (a possibility not illustrated here). Ultimately it may be necessary to distinguish two subcategories according to whether the tempo remains constant or changes. Tempo modification, however, does not alter the impression of a rhythmically smooth transition in type (a) sequences.
8. Note, however, that Vera subsequently establishes a new rhythmic pattern.
9. Since there are temporal limits on what is perceivable as a rhythmic interval (cf. Allen 1975), the two approaches to measurement are of course not wholly unrelated.

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