

PHONETIC ANALYSIS OF GLOSSOLALIA IN FOUR CULTURAL SETTINGS

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Glossolalia tape-recorded from four groups — English- and Spanish-speaking — showed characteristics common to all groups. It is a noncommunicative behavior of vocalization. Although the phonetic inventory and the grouping of sounds vary somewhat from group to group, these are stereotyped within the group and rigidly adhered to. An analysis of the phonology, accent pattern, and intonation shows the individual utterance to have a threshold of onset, a brief rising gradient of intensity, a peak, and a final, often precipitous decay.

This paper proposes that this agreement, despite cultural diversity and difference in language, exists because glossolalia is an artifact of a dissociative state termed trance. A brief characterization of the role of this little researched state is attempted on the basis of field experiences, and a comparison with similar manifestations in other areas.

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Is glossolalia distinctive from normal speech?

Is glossolalia a single phenomenon—i.e., possessing characteristics common to seemingly diverse occurrences—or is it a label given loosely to very different kinds of utterances?

ANSWERS TO THESE QUESTIONS, crucial to the interpretation of this phenomenon, have not yet been established because this requires the recording of a large number of phonetic characteristics in instances of glossolalia in different cultural settings.

Few glossolalia utterances have been transcribed, and those that have been published are incompletely recorded. Stress indication is often left off, and no study gives the intonation pattern.

The omission of intonation is understandable, as Hockett (1958) points out:

Until recently, intonation was more or less tacitly ignored by most linguistic scholars on the assumption that it did not vary significantly from language to language, or that anything so 'natural' warranted serious consideration. . . . Recent research suggests that every language has a system of basic speech melodies which is as unique to the language as its set of vowel and phonemes. (34).

And so Samarin says:

Some syllables in glossolalia get extra stress which is also accompanied by greater volume. The incidence of this stress is probably to be explained by intonational and emotional factors, not linguistic ones in the strictest sense. (74).

Since he did not consider intonation linguistically important, he did not record it. Jaquith (1967) likewise failed to record several characteristics, stating:

The transcriptions have been marked for segmental phonemes, syllable boundaries and contour-final junctures. Features such as stress, vowel length and intonation have been left unmarked to simplify the orthography. (8).

Not only does existing literature fail to report all components of a glossolalia utterance, but the literature is also significantly lacking in cross-cultural or cross-linguistic research.

In this paper, we shall present glossolalia utterances from four cultural settings, in two languages, and analyze them in terms of the linguistic characteristics of phonetic inventory, accent pattern, length, pitch, and quality of vowels, and for the Mexican material, also volume and intensity.

COMPONENTS OF NORMAL AND GLOSSOLALIA UTTERANCES

An utterance is first of all an audio signal consisting of vowels and consonants which alternate according to the phonological rules of the particular language. For example, neither in English nor in Spanish can the *bd* cluster stand in initial

position, while either *st* or *sl* can assume that position in English, but not in Spanish. In both languages a vowel can stand in initial position and may be followed by another vowel, a consonant, or a consonant cluster.

* * *

The vowels in the glossolalia utterances transcribed have the following notation and pronunciation: *a* as in *father*; *i* as in *tick*; *w* as in the Rumanian *romin*; *ε* as in *dapple*; *ø* as in the German *Öl*; *o* as in the Spanish *nombre*; *u* as in *foot*, and *ə* as in *account*. The stops are all unaspirated; the *s* in the Spanish samples is not the speech sound, but is produced with the teeth almost touching and the tongue curled tightly behind the lower teeth, resulting in a tense hiss. The glottal stop is represented by ?.

* * *

Vowels and consonants are grouped into units called segmental morphemes (e.g., *John*, or *number*), and in our Indo-European language family, these are of differing length.

Segmental morphemes carry an accentual system. In English and in Spanish, this is a system of stress, but the rules for placing stress are different for the two languages. In both languages, however, relative loudness (Hockett, 1958: 47; Lehiste and Peterson, 1959) and length (Fry, 1955) are used to indicate primary and secondary stress levels.

In addition, spoken language is characterized by a stress-timed rhythm, i.e., there is a tendency to keep the interval about equal from one primary-stressed syllable to the next. Hockett points this out for English (1958:53); similar tendencies also prevail in other languages.

* * *

In our transcription of glossolalia, the primary stress is represented by ' , the secondary stress by ' , and : after a vowel indicates length.

* * *

Morphemes or their combinations are separated by pauses, but neither in English nor in Spanish does the occurrence of the pauses and of the primary stress coincide, since in both languages the primary stress can fall on the first, second, etc., syllable.

Morphemes are grouped into phrases (sentences), which are of unequal length. Superimposed upon these is a suprasegmental morpheme called intonation, determining in part the meaning. In the English sentence *I am going home* the intonational peak could fall on any one of the four constituents, depending on the communicative intent of the speaker. Every language has a basic set of speech melodies (intonations); the English declarative sentence has a different melody than the Spanish one.

In the transcription of intonation here, the pitch is indicated, with respect to each individual's middle range (represented by a center line), by a graphic curve.

In discussing the data, I am calling the smallest unit, usually a consonant + vowel or rarely a consonant + vowel + consonant group, a *pulse*. Pulses are united into *bars*, which are separated from each other by a pause. This pause is usually about as long as that between two words in English. Several bars form a *phrase*. The pause between them is approximately as long as that between two successive English sentences in running speech. An *utterance* consists of several phrases¹.

PROCEDURES

Sources of data

The sound tapes used for the transcription presented in this paper provide glossolalia utterances from four cultural

¹ The patterns continually repeat themselves, and therefore a few samples from the data for analysis will suffice to illustrate the various points to be made, although all the samples were, of course, transcribed.

settings. Three groups spoke English—a Streams of Power, a Tent Revival, and a main-line Protestant congregation. In the Mexican Pentecostal church, the language was Spanish.

In the English-speaking samples the recordings were made for purposes other than the study of glossolalia, and the tapes contain only a limited number of samples, selected for recording by criteria irrelevant to our study, and therefore presumably a reasonably random selection, but questions concerning, for example, the identity of the speaker, stereotypy of the utterances, kinetic behavior, etc., remain largely unanswered.

In the Spanish-speaking samples, however, the field research was undertaken with the express purpose of glossolalia research. As many relevant details as possible were noted, and every glossolalia utterance that occurred during the Sunday service and the Thursday prayer meeting over a period of 2 1/2 months was recorded.

Transcription procedures

In transcribing the tapes, the phonetic pattern was first discerned, a difficult endeavor since the delivery is usually fast, the utterance brief and lacking in linguistic cues, such as vocabulary or sentence structure, to check the transcription against. Letting the rendition get "cold," then listening to the tape again, and reading along with the written record, helped to improve the rendition of such details as the number of *la* pulses in a bar, or unaspirated *t* vs. *d*. The pauses, stresses, intonation, and in the Mexican samples also volume and intensity, were so readily discernible that no subsequent corrections were required.

Reliability of transcription.

As a rough check on the reliability of the transcription, at the suggestion of Professor Dittes, three anthropology graduate students individually transcribed one of the utterances. With minimal instructions concerning the characteristics

and their symbols, each one was able to sketch out the general pattern in agreement with this investigator. Predictably, since none of them had phonetics training, they did not hear the glottal stops; one scribe had difficulty distinguishing the primary and secondary stress. But generally speaking, they had no difficulty perceiving the intonation pattern, especially the peak ("like a question") and the final drop ("as if a record player is shut off and the needle left on the record").

THE SETTINGS AND THEIR GLOSSOLALIA *Streams of Power*

The following information is summarized from Jeanette Henney (1967), who also made the tape-recordings of these glossolalia utterances.

The Streams of Power movement came to the Caribbean island of St. Vincent in 1965. It was started in Holland about 1952, and has since spread to the Dutch West Indies and Dutch Guiana, to Trinidad, St. Lucia, in addition to St. Vincent, as well as to parts of Europe and Africa. In St. Vincent, it derives its membership from the lower social strata. The congregation is largely composed of women; about 20% are men, another 20% are children.

The service, which usually lasts for two hours, begins with a period of about 40 minutes of singing. This singing is loud and fast, and there is much hand clapping, stamping of feet, and gesturing. The "Service of Adoration" follows, during which glossolalia is a prominent feature. The evangelist, with his head elevated and his eyes tightly closed, begins whispering repeatedly into the microphone such phrases as "Thank you, Jesus," "Halleluiah," or "Praise the Lord," setting the pattern for the congregation to do the same. Periodically, someone in the congregation breaks in with a glossolalia utterance, usually concluding with "So speaks the Lord," and then

proceeding in ordinary language with the interpretation. About seven or eight people of both sexes may make contributions of this nature, including, occasionally, the evangelist. The latter then closes the Service of Adoration with a prayer.

The glossolalia is viewed by the Streams of Power Movement as revealing the words of Jesus himself, or of the Holy Spirit. The message is given in a foreign tongue, and its essence is subsequently repeated in the vernacular. The unknown tongue is believed to be an ordinary foreign language which could be understood if someone who knew that language happened to be present. The interpretation also rests with the Spirit. According to the evangelist, the person who is speaking "doesn't even know what he is saying."

Speaking in tongues is regarded as a highly desirable "gift of the Spirit" that is accessible to anyone who is a "child of God" (i.e., who has repented). The evangelist emphasizes that speaking in tongues makes a believer strong, and guarantees that he will not backslide. The members who speak in tongues state that they feel "uplifted" or "exalted" afterwards; it makes them "feel good." They remember speaking in tongues, but do not remember what they said. The trances manifested in glossolalia are short. Eyes are kept closed, only occasionally is trembling or shaking noted and it is minimal. Recovery is always rapid.

The three examples chosen from the Streams of Power utterances illustrate several points.

Figure 1 is a perfect unit utterance with an onset in the middle range, a single peak at the beginning of the second phrase, and a decay to the lowest pitch level at the end of the fourth.

The utterance in Figure 2 is somewhat longer, and the peak does not occur until the end of the third phrase, from where it carries over into the first bar of the fourth phrase. The peak is anticipated

Figure 1.

St. Vincent Glossolalia: Man
(3.2 secs.)

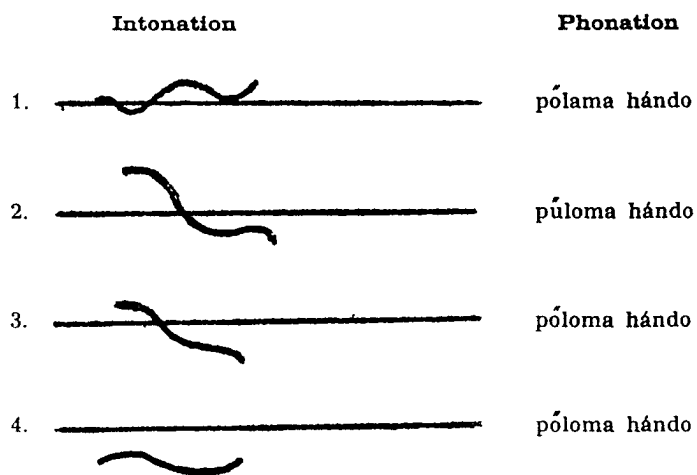


Figure 2.

St. Vincent Glossolalia: Woman
(10.5 secs)

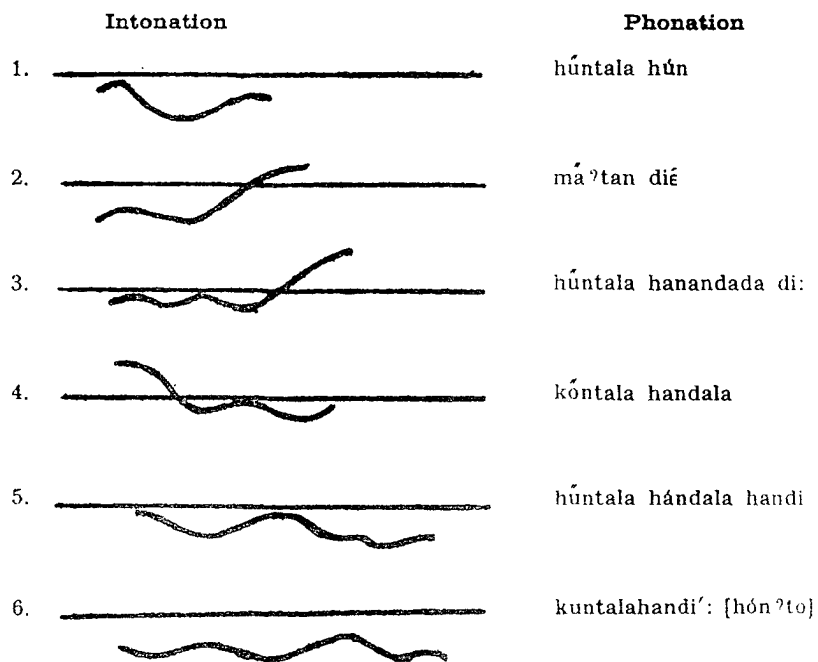
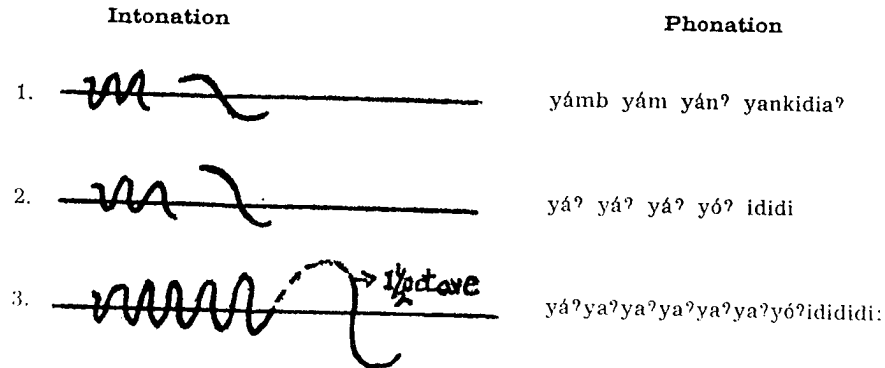


Figure 3.

St. Vincent Glossolalia: Woman
(7 secs.)



by a phenomenon I want to call "crowding," with five pulses occupying the bar instead of one or two as before. The rise on the *i*: at the end of phrase 3 is remarkable here; if an *i* in running discourse is to be as loud as the other vowels surrounding it, increased energy output is needed, i.e., an additional effort. A change from *a* to *i* thus already involves an increase in energy with respect to the *a* of the preceding pulse, and then there is still another effort evident in the rise in pitch. Further examination of the figure shows that instead of a decay, a slight recovery occurs (something like the second wind of a runner) at the end of the fifth phrase going over into the sixth, and by that time, it seems, the energy level is so depleted that the decay is truly precipitous, so that the last bar of the sixth phrase is hardly audible.

In the Service of Adoration, as pointed out above, glossolalia usually occurs singly, i.e., in an orderly fashion, with one speaker waiting out the utterance and interpretation of the other. The transcription in Figure 3, however, comes from a section of the tape, where there is an overlap between several utterances,

all involving the pulse "ya?". The sample given in this figure begins on a pitch higher than heard in the other utterances. The pulse frequency is very high also, the phone and pulse inventory extremely restricted. The peak comes with a tremendous burst of pulse frequency leading to it (first bar, phrase 3) in the second bar of the third phrase, pushing the pitch an octave-and-a-half above the level of the first pulse of that phrase, and with this enormous effort exhausting all available energy, there comes a steep drop ending in a sigh.

Midwestern tent revival

The tape of this Tent Revival meeting was produced by Linda Kimball, a graduate student in the Dept. of Anthropology, The Ohio State University, in the summer of 1966, in Columbus, Ohio. The description of the cultural setting is based on her personal communication.

Tent revivals were brought to this country by immigrants from the lower English working class, and lower-class whites still constitute the bulk of the participants, with 20-30% Negroes; 50-75% of the participants are usually women. As a rule the evangelists are not

affiliated with any established church, and there is a great deal of individual variation between them in the way in which they conduct the revival meetings.

The services are only minimally structured. Roughly, three phases can be distinguished: (1) a warm-up period, with a great deal of singing, hand-clapping, and some talking by the assistants of the evangelist; (2a) the first excitation period, when the evangelist comes in, gives a sermon, which is intermingled with singing and possibly some glossolalia; the offering is taken up, at which time the people tend to be quite restless; (2b) the second excitation period, when the people feel relaxed, high excitement sets in, there is healing, preaching, trancing, occasionally also glossolalia, and singing; and finally (3) the "cooling-off" period, with singing and hand-clapping, usually in the absence of the evangelist.

Trance in this cultural setting is interpreted as the Holy Ghost being *in* the person, as "getting" the Holy Ghost, and as evidence that the person is "right with God." It brings prestige within the group and is considered an enjoyable experience. Glossolalia, according to the preacher, is a sign that the Holy Ghost is moving the tent and makes people do it. The main thing, however, is that you "fall down," meaning that you go into trance, showing that the Holy Ghost is really in you, that you are "slain in the Spirit." After speaking in tongues, people report "feeling wonderful."

The glossolalia is as little structured as the rest of the ritual behavior: sometimes it is interpreted, sometimes not. At the meeting represented on the tape, for example, one woman interpreted her own glossolalia and that of several others.

We have studied a spectrogram of the only glossolalia utterance which was audible clearly enough above the very high noise level of the tape. It starts at a very high pitch, and with a pulse frequency rate so elevated that the phonetic pat-

tern is obliterated, giving the impression of a rhythmically pulsing scream.

We see a succession of peaks, roughly fourteen of them, and a very clear sloping of the overall curve, indicating a gradual drop in energy level. After the tenth peak, we can hear a few articulated pulses: *páloomalalaya*, strikingly similar to the phrases heard on the St. Vincent tapes, and again after the eleventh peak: *káloomahala*. The drop occurs, very steeply, after the fourteenth peak, with a glissando "ah" ending in a sigh, and a barely audible "Jesus." There is no interpretation.

The fact that the articulated bars suddenly appear late in the total utterance seems to demonstrate that a drop in energy level was needed for articulation to become possible, or stating it differently, there seems to be an energy level beyond which articulation no longer occurs.

Main-line Protestant church in Texas

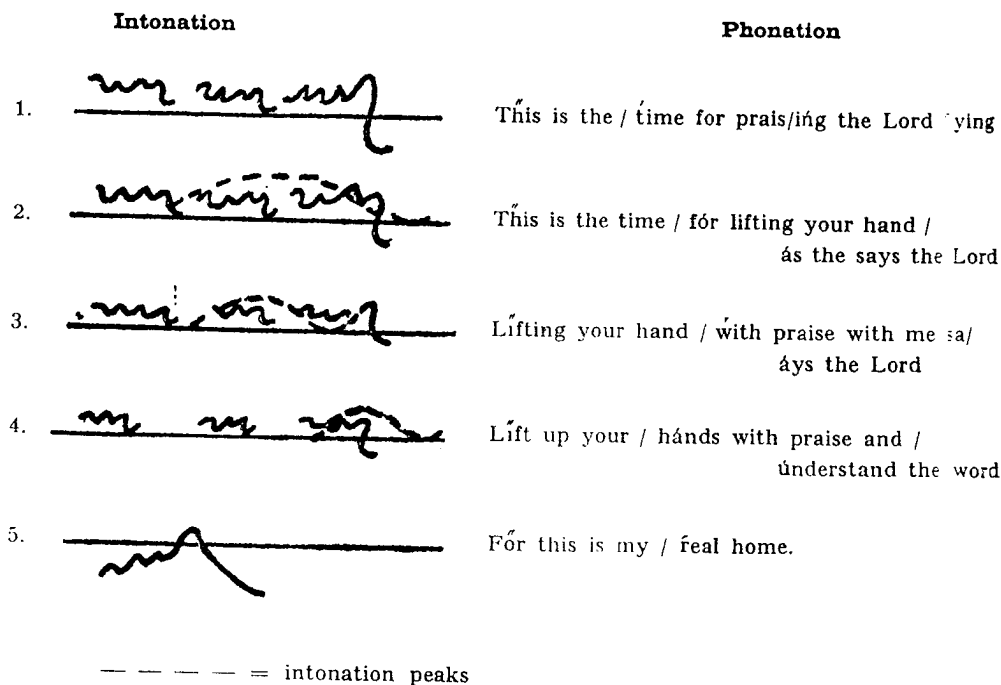
In 1965 the National Educational Television Network presented a program about "Divine Healing and Speaking in Tongues." As the announcer points out, such "early Christian practices" have spread from the Pentecostal churches to the major denominations, and in the Houston, Texas area can now be found in Baptist, Episcopalian, and Presbyterian churches. In these congregations, Sherril reports (1964:139), glossolalia is interpreted as evidence of a "baptism in the Spirit."

Unfortunately, we are not told in which church or denomination the few glossolalia samples were recorded.

The utterance selected for Figure 4 contains not pulses devoid of semantic content, but intelligible words. Yet it is my judgment, that this also is glossolalia rather than an ordinary-language utterance. It starts at a relatively high pitch, almost as high as the Tent Revival utterance. The pulse-frequency rate is considerably elevated, "panting" or "ur-

Figure 4.

National Educational Television Network
(14 secs.)



gent"—to use the expressions of some authors who describe glossolalia. But principally, its stress and intonation pattern is the same as that shown in Figure 1-3. There is a regular organization into bars and phrases, and twice the bar boundary cuts across the semantic level, once in phrase (1), separating prais/i^{ng}, and again in phrase (3) where the bar pause cuts a vowel in half, making *says* into [se?ez]. The peak, since the pitch is already so very high, cannot easily go in that direction, so it finds expression in a greater frequency of the pulses, and as in Figure 2, recovery is attempted, once in phrase (3) and again in (4). The decay of the utterance sets in with *real* in (5).

A Pentecostal church in Mexico City

The field work for this section was done by the author in the summer of




1968. The first Apostolic (Pentecostal) congregation of Mexico was founded in 1914. Although the initial stimulus came from the United States, the development of the church in Mexico has been an independent one. In 1964 the congregation had about one thousand ministers working in Mexico, and in missions in other Latin American countries (Gaxiola 1964:11).

The congregation which I observed is located in one of the poorer sections of the capital. Of the approximately ninety members, about 60% are women, 20% men, the rest children. Most come from the lower middle class, and the majority of the adults has been in Mexico City less than ten years.

The services consist of singing hymns with rhythmic clapping, to guitar or piano accompaniment, of sermons, testimonies by the members, and altar calls.

Figure 5.

Mexico: Glossolalia of S.A.Z. (Man)
(2 ½ secs)

	Intonation	Phonation
1.		Ka? śia? śia
2.		ʔiya kí śia?
3.		śi? a

During the latter, the members of the congregation come to the front of the church, kneel down, and every person prays his own prayer, many of them very loudly, often with the music continuing.

Glossolalia usually occurs during these altar calls. Little dogmatism is attached to it; it is considered a manifestation of the Holy Spirit, a baptism of the Spirit which comes to take up its abode in the person as in a tabernacle. It is not believed that glossolalia represents any particular language, and there is never any interpretation.

Women go into glossolalia much easier than men, and almost all of them are habitual glossolalists. Of the men, less than half reported having had the experience. The men have an impressive concomitant kinetic behavior, such as lifting their arms, rapidly shaking their heads, twitching in the face, jerking the shoulder. In the women, however, crying is the only consistent accompanying behavior observed. Also, the men's utterances are loud, while those of the women can rarely be heard, giving rise to the impression that only the men have this "manifestation of the Holy Spirit."

The rythmical clapping often seems to induce the trance and also to re-establish

it once it has decayed. Recovery from it is very fast, and it is followed by an intense feeling of well-being. Once a trance with glossolalia has been achieved, subsequent events are initiated with great ease; however, achieving vocalization for the first time after the state of dissociation has already been reached seems very difficult for some people.

Figures 5 and 6 are examples of utterances occurring in this congregation. The phone and pulse inventory is very restricted and varies little from speaker to speaker. No innovation was introduced during the entire period of observation (2 1/2 months). Both low-energy and high-energy sustained glossolalia occur, but the latter differs from the former only by volume and tenseness. In every respect, these utterances show the same features as those of the English speakers, except for an occasional upbeat effect (Figure 5, #1; Figure 6, #1 and #2), not heard with the latter.^{1a}

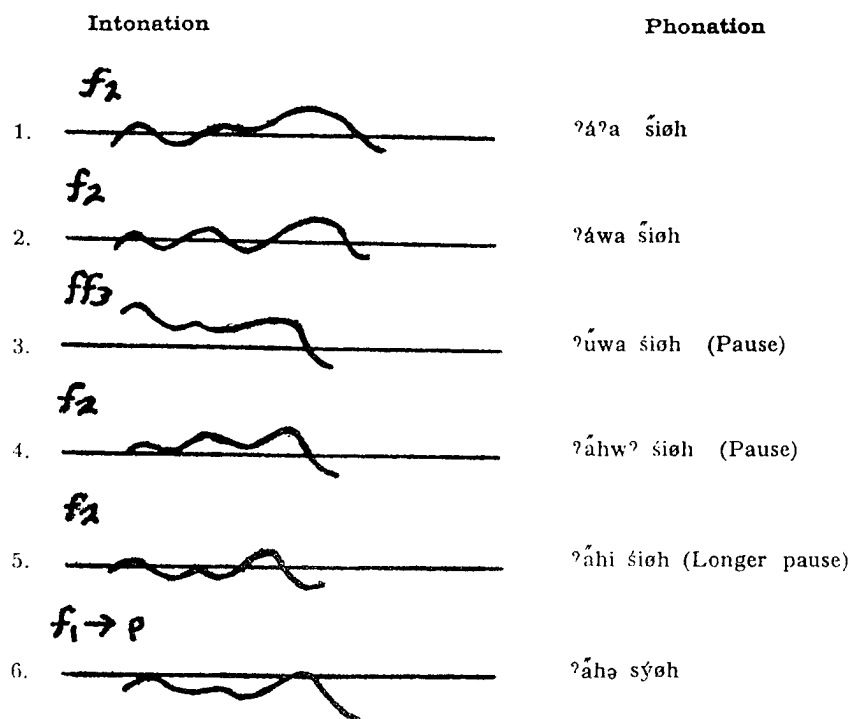
Comparison with normal utterance.

Figure 7 presents a comparison of some of these glossolalia utterances with normal utterances by the same speakers. A dif-

^{1a} A detailed exposition of the Mexican observations will be the subject of a separate article.

Figure 6.

Mexico: Glossolalia of J.D.L. (Man)
(9 secs.)



f, p = volume; 1-3 = tenseness

ferent and simpler notation system is used. Relative intonation is indicated by the numbers above the phonation. For the glossolalia, these numbers correspond to the curves of the figures. The two English normal utterances are interpretations made of the glossolalia. The Spanish normal utterances were taken from the same service as the glossolalia.

CONCLUSIONS

The glossolalia utterances recorded here from four different cultural settings and in two languages, demonstrate common characteristics which distinguish them from ordinary language.

(a) On the phonetic level, every pulse begins with a consonant and there are no

initial consonant clusters. Usually, the pulse is open, i.e., it does not end in a consonant.

(b) Bars are usually of equal duration, especially if the pauses are also considered, as one would in music.

(c) The accentual system is one of stress, with a primary and secondary accent. The primary one falls on the first pulse of each bar, giving the impression of scanning, in a trochaic rhythm. The primary stress is always preceded by a pause.

(d) Phrases are of equal length. Within an utterance unit (i.e., with one peak), the intonation pattern regularly shows an onset in the medium range, a peak, and a sloping gradient leading to an often precipitous decay.

Figure 7

*Comparison of Normal and Glossolalia Utterances***St. Vincent Man (Figure 1)**

3 4 3 3 2 2 3 2 2 1
 My chil'ren, my chil'ren, walk in my light
 3 3 2 3 2 4 2 3 2 2
 pólama hándo púloma hándo

St. Vincent Woman (Figure 2)

2 2 2 1 2 2 2 2 2 2 2 1
 Oh my chil'ren, I am the truly omnipotent Lord, my children
 2 1 1 2 1 1 3 2 2 3 4 4 2
 hüntala hún má'tan dié hüntala hanandada di:

Mexico Man (S.A.Z.) (Figure 5)

1 3 2 1 1 1 3 2 3 2 2 3 2 3 1
 Entonces fue mucho gozo hablando en nuevas lenguas
 2 1 2 2 3 2 1 2 1
 Ka' sia' sia 'iya ki sia' si'ə

Mexico Man (J.O.L.) (Figure 6)

3 2 2 2 2 2 1
 Gloria al Senor Jesu Cristo
 2 1 1 3 2 2 2 3 4 3 3 2
 'á'a síoh 'áwa síoh 'úwa síoh

(e) Glossolalia is not productive. Once an audio-signal has been internalized, it becomes stereotyped. This was also noted by other observers (Pattison, 1968:80; Spoerri, 1968:150). Within the group, the pattern does not vary significantly. Sometimes, within the same group, the low-energy utterances have a different pattern than the high-energy ones, and in these cases, the lower the energy level, the more varied the pattern.

f) Glossolalia is noncommunicative. It does not transmit a specific message to the listener. All informants and observers agree that the glossolalist often does not hear himself, sometimes is not aware that he uttered an audible signal, and even if he did hear himself, he does not afterwards remember what he said, and thus cannot repeat it. These observational

facts exclude the utterance of a communicative signal on the speaker side. On the listener side, there is no linguistic code in common with the speaker. Thus, as Spoerri (1968) puts it so succinctly:

Glossolalia involves... the privation of the informative and communicative side of discourse; speech becomes musical sound. (152)²

DISCUSSION

Since the features of the glossolalia utterance elaborated above cut across cultural and linguistic boundaries, we will have to ask how we can account for this

² "Die Glossolalie schliesst... den Verlust der Information- und Kommunikationsseite der Rede in sich; die Sprache wird zur Lautmusik."

fact. Is there something about the glossolalist that distinguishes him from the ordinary-language speaker?

The state of the glossolalist

I need not here quote the extensive literature references to the fact that the glossolalist does indeed behave differently from ordinary-language speakers. He tends to have his eyes closed, is subject to motor automatisms, he may flush, perspire, tears may flow. In the older literature he is described as being "in a hypnotic trance," "in ecstasy," "in an epileptic seizure," etc. The German literature often refers to the state as *Ausnahmestand*, an exceptional condition. In fact, there is nothing pathological about it. In an extensive study Vivier (1968) has shown that the glossolalist is of significantly better mental health than his traditional counterpart.³ Informants are in perfect agreement about its favorable after-effects. The glossolalist has simply learned, by imitation, or sometimes spontaneously, to relinquish some of his controls, to dissociate. The result is:

a state in which we observe a certain alteration of consciousness, an alteration which may bring about changes, in varying degree, of certain functions: changes in concepts of identity, in memory functions, in sensory modalities, etc. (Bourguignon, 1968: 332)

The presence of this state has escaped some modern observers (Jaquith, Wolf-ram, e.g.). This is due to the fact that they have seen only laboratory glossolalia. Once a person has learned to dissociate, subsequent events are initiated more and more easily, and some of the organizational pattern becomes eroded together with a drop in intensity and dissociational levels. As Pfeiffer remarks (1968):

³ ED. NOTE: see also, the paper by Virginia H. Hine, Non-Pathological Glossolalia: A Functional Interpretation, pp. 211-226, in this issue.

It is to be supposed that frequently repeated trance leads to an instability of consciousness, and that the switchover [from a normal state to trance] can be induced by even a slight stimulus, in the manner of a conditioned reflex. (12)⁴

Ignorance of this fact has on occasion led to the charge that the glossolalia utterance is faked. (Calley, 1965).

What is glossolalia?

We may now suggest that glossolalia be defined as an event of vocalization uttered while the speaker is in a state of dissociation termed *trance*. This definition is simply deduced from the empirical data sketched out above. But we are really no further in our understanding than we were before, since a deduction cannot state anything new. I therefore propose to advance the hypothesis that the state into which the glossolalist places himself, or rather its neurophysiological correlates, drive, as it were, the brain centers responsible for the vocalization. I see no other way in which to account for the perfect regularity of the organization and cross-cultural agreement in the glossolalia utterance. I am suggesting, in other words, that the glossolalia is an artifact of the trance; it is generated by it. Trance is the primary behavior pattern, and as such, it produces organizations similar to glossolalia patterning in breathing rhythms (Umbanda cult, see Pressel, 1968), mass trancing of the Shakers (Henney, 1968), and in curative dances of native societies (Zempleni, 1966), to name just a few.

What the artifact of the trance will be, is decided by the respective learning situation or cultural expectation. Glossolalia is thus a multi-layered behavior, with

⁴ "Es ist anzunehmen, dass häufig wiederholte Trance zu einer Labilität des Bewusstseins führt und dass die Umschaltung nach Art eines bedingten Reflexes schon durch geringe Reize ausgelöst werden kann."

the trance state representing the deepest level, the next one being the vocalization, and then the linguistic (in the Mexican examples, e.g., possibly the upbeat in the intonation pattern) and cultural levels (in Mexico, for instance, the culturally conditioned relative immobility of the women during prayer).

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