In the study of language the concept of evolution has been applied to two different aspects of language history. The first has to do with the emergence (or origin) of language as a means of communication and as a concomitant of culture in the history of man. Here one starts with the hypothesis that the ancestors of Homo sapiens were different from us physically and communicatively. This discontinuity is bridged by physical and cultural evolutionary transformationism in which there are no fixed bounds to specific change. For language this means that the primordial system was one of single units of sound but on a duality of patterning, one phonological and the other semantic (Hockett and Ascher 1964; see also Greenberg 1968).

The second aspect has to do with evolution in language as language. It is suggested (Hymes 1961) that some languages have been or are superior or more advanced because of their successful adaptation to their environments. For example, they have a richer or more complex lexicon and set(s) of functions. In this view one can expect the less advanced languages to perish where they are in direct competition with the more advanced languages of the world. This is one reason why the so-called 'primitive' languages become extinct: their speakers find them inadequate for the new functions that these languages must assume.

For the rest, evolution as a technical term is not seriously used. It is not applied, for example, to change that is experienced in the life-history of specific languages although Greenberg insists that the recognition of evolution as transformation in historical linguistics 'substantially antedates the first modern statement of this theory in biology by Lamarck in 1801' (1968: 34). But then the inapplicability of evolution to language is rejected with respect to progress or advance. This component of the theory, he says, 'is not valid in the instance of language' (p. 37).

Then again the term is not seriously used in 'biographical linguistics' (a term that ought to contrast with the well-established fields of historical and comparative linguistics; see Firth 1935). The history of language in the life of an individual is not considered evolutionary, probably because of the notion that the emergence of language in the young human is not an independent process; its dynamics is not internally motivated. In short, each person simply learns to use what is already in use around him.
this view language does not evolve; it is simply acquired.

There are those, of course, who now argue against this simplistic model of personal language learning. One of the well-established notions is that which Chomsky has insisted on: that the human being has a species-specific competence that makes language possible. Lenneberg builds on this notion and seeks to demonstrate its biological foundation (1964). In other words, the helpless, dependent child surrounded by more mature and talking creatures does not ingest language as he does his mother's milk. He brings to the environment of sound a capacity to make something out of it, in a sense to take a stab at making his own language. He in fact succeeds in this attempt. That this language becomes more and more like the language of the environment does not minimize his own genius. What this genius is, of course, is part of the business of linguistics to describe.

The study of language competence, like the study of language in general, should not be restricted to what is normal or most accessible. Linguistics matured as a science because it first began to comprehend the primitive forays. The study of child language is another one of its forward steps. Now we must begin to look seriously at various linguistic anomalies to determine what they might teach us about language. The present study is a timid venture in that direction. It focusses on pseudolanguage as an anomalous form of human language and on the progress that characterizes its evolution from inception to fluent use.

The linguistic phenomenon under consideration is glossolalia. The term is ordinarily used of religious pseudolanguage or 'speaking in tongues'. Although there is some advantage to restricting its meaning in this way, we must not be misled into insisting that it be defined by its social use or by psychological states that sometimes accompany it (e.g. altered states of consciousness) (Samarin 1964a, 1969b). Religious glossolalia is linguistically the same as nonreligious glossolalia (in the sense that all human languages are the same). Therefore, if we choose to use religious texts for a linguistic analysis, it is not only because in our corpus glossolalia is better or more abundantly represented by pseudolanguage used in religious contexts.

Glossolalia is the production of utterances that bear no systematic resemblance to any specific language and that, although they are (almost) completely devoid of sound-meaning correspondences nevertheless are deceptively language like in appearance. There are, in fact, glossolalic discourses that most people on casual hearing, would have difficulty in distinguishing from natural language. It is only on examining transcriptions of such discourses that one sees through the facade and identifies the fictitious nature of these pseudolanguages. The facades are sometimes quite good.

It might be supposed that there would be some significant differences between the pseudolanguages of those people, like religious glossolalists, who dead - or angelic, and those who are only playing at talking nonsense language. There are, of course, some differences, but since there is considerable variation in performance on the part of both kinds of people, it is, as

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least at this time, impossible to isolate the discriminating features of each kind of discourse — if there really are any.1

Glossolalia is therefore different from babbling and other such forms of verbal behavior on the part of human beings who have already acquired language. In babbling one wants to avoid the appearance of language and the best that one can do, on the spur of the moment, is to imitate the prelanguage of infants. In glossolalia, however, there is an attempt to create a language. This is like creating a fiction which is in search of reality. (What happens in this search is one of the points of this study.)

While the ideology of pseudolanguage is clear enough and its ontogeny amenable to empirical research, its genesis is somewhat hidden from the observer. We can, of course, experiment with the production of pseudo-language. Pseudolinguistic creations, since they are fresh from the mind of their creator, ought to reveal something about the forces that generated them. Unfortunately, there is very little such experimentation. The two I conducted were pilot studies where, because of the goals I had, there was little rigorous control for ultimately making hypotheses about the mechanisms behind the genesis of pseudolanguage.

The first experiment was conducted with a group of six graduate students who were asked to talk in some imaginary language in the presence of the other students. These performances were tape-recorded and then discussed by the group. Although the pseudolinguistic texts were accidentally erased before they could be transcribed (the only such travesty in all of my experience!), I can report that there was a very great disparity in the performance of the subjects. At one extreme, there was a fluent and convincing discourse in nonsense given, the speaker later told us, to an imaginary audience at the United Nations but on no particular subject, and, at the other extreme, the utterances of a school teacher who revealed herself as a very articulate person in English, but her pseudolinguistic performance reminded one of persons with some speech pathology. At some points all she could do to keep going was to pronounce the letters a e i o u.

In another experiment done recently with the students in my course on language learning, I wanted to see if it would be worth investigating incipient pseudolanguage mediated through writing. I also wanted to see what influence conscious reflection would have on the genesis of pseudolanguage. In this experiment the students — with no preparation other than being told they would have an explanation later — were asked to think of words or sentences in some imaginary language; these did not have to have any meaning. After 30 seconds they were told to write down the utterances to the best of their ability. The results of this crude experiment were beyond my expectations. Although most of the utterances were short (an artifact, I believe, of the experiment itself), they are remarkably like those found in glossolalic utterances. For the most part, for example, they are pronounceable:

(1) padla bowa law
(2) hulabamba kua lo
(3) dubaki wo kuranari lugoso.

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(e.g. dadadada. . . .) nor do they consist of a series of isolated forms given somewhat in the manner that would characterize a random listing of nouns or verbs in a language rather unfamiliar to oneself. Therefore the 'words' strumpf (corrected from strumpl) and awatatsaneketsa are unusual, because both constituted the complete output of my students in their attempt to produce pseudolanguage.

Nor, it should be added, is glossolalia some kind of word salad (the phrase comes from literature in German on the speech of schizophrenics) that has no meaning in the normal sense. It only obfuscates our investigation of human speech to use the term glossolalia for obviously unrelated forms of verbal activity. I would therefore like to see excluded from the meaning of the term the kind of discourse illustrated below. It was recorded by Sister Aquina during meetings of 'The People of the Spirit', a separatist religious sect speaking Shona (1967). 4

We see from these data that the genesis of pseudolanguage is not entirely hidden from us. What we do not know, however, is why the initial utterance should take the form it does. Are the utterances truly random ones? Are they derived from what the memory provides the speaker: words from known languages or even utterances from childhood long ago forgotten? 3 Will incipient pseudolanguage from a given population not succeed at all in producing pseudolanguage, they succeed because they can organize their initial utterances. These may be

Gloria (and) mhiri [glory] (to the father).
Christ diviner. Oh viner, Christ diviner.
Come gloria, come gloria, come gloria, half, half.

Wonderful gloria, come beat us.
Alleluja, alleluja, alleluja.
Brrrr.

Hameni [amen], gloria, gloria, hameni.
Hosanna, hosanna, hosanna.

Wonderful gloria, tora [take] picture.
Half, half.

Christo Jesu, Mwari unera [Holy God], Christo Rabbi,
hameni, Jesu, zvakana [very good] rabbi, rabbi,
rabbit, rabbit.

Germany, Germany, hameni, hameni, brrr.
Gloria, gloria, hameni, terra, terra, terra.
Homborera, homborera, terra, terra.

Gloria grammar, Jesu, supper.

To repeat, I do not consider this glossolalia although others do. The linguistic differences between such discourse and real pseudolanguage are obvious, and the phenomena should be distinguished by different names.

When questioned about her performance, she reported that she was thinking about German, but she has also studied a little Italian and has 'looked at' Esperanto. Her pseudolanguage is certainly not German (for example, [x] does not occur before [l]), and it looks more like a Romance language than anything I know.

The second feature about incipient pseudolanguage is that it consists of utterances or strings of utterances that are organized in a hierarchical way. That is, pseudolinguistic utterances do not consist of undifferentiated syllables.
very simple indeed. In my first attempt to produce pseudolanguage (mentioned above) I started with the form baklava which has an inventory of five phonological units (the vowel a and the consonants b, r, d, and t). I was able to continue uninterrupted for a minute or so. The inventory did not remain the same, however, for there was evolution in the direction of an enlarged inventory: m to parallel b, and r to parallel d. I might add that the glossic discourse did not have an English intonation. Rather, it seemed to have two levels of pitch with some syllables more strongly stressed than others. It reminded me of the secret language of the nagraž hunting society (Samarin 1959), a language I have heard but do not speak.

If an organizing principle is at work at the very emergence of pseudolanguage, it is not at all surprising that it should operate from that point on. How then does it influence the evolution of a pseudolanguage? To answer this question we must look at glossolalic texts we have from habitual or practiced speakers of pseudolanguage. We have no good records of various stages of glossolalia from the same speakers, starting with the first or earliest discourses.

The handicap of dealing with such texts is obviously that one must deal with a certain amount of ‘learning’. This is to say that we can expect a speaking student might use delomerik, estero, and imesta on other occasions. If she were to continue the practice of speaking pseudolinguistically, the emergence of a new one seems to be correlated with having a kind of internal consistency or coherence. The simplest form of glossolalia would be an utterance like makara rna, dadara makara ma. This is the kind of thing one does, of course, in science fiction, for example, what is sometimes recorded as having been spoken is actually unpronounceable. He therefore chooses sounds from languages known to himself, usually his own native language, and organizes the stream of speech into breath-groups that are put in the mould of intonational contours either known or imagined by him as being language-like. The discourse is also accompanied by nonlinguistic behavior that is generally associated with speech. This includes appropriate paralinguistics and kinesics. There is, then, a social dimension to glossolalia that authenticates it and gives it value. Whether or not there is evolution in these parts of glossolalic behavior is not known. If there is, it is minimal, because (I speculate) the speaker does not imagine that speech can differ in these respects. His linguistic typology uses only segmental sounds in the criteria.

The two major processes, then, are repetition with diversification. Producing a pseudolanguage is, in fact, like doodling. One may start with a straight line or a complete circle, but after a brief repetition of this pattern a new element or pattern is introduced. One may choose to continue with a straight line but go off at a new angle or continue with the circle but move after each cycle to the right. Then again something new is introduced. In doodling, a person may give up the original production and start anew, but in glossolalia one continues until the discourse is finished. But a self-contained doodle that has had some time devoted to it is like a glossolalic discourse in having a kind of internal consistency or coherence.

The simplest form of glossolalia would be an utterance like dadadada... But since no speaker would imagine this to be linguistic because it is so unlike language, we can assume that a glossolalist would not accept it as real; he would very soon move to something more complex. This might be dadadadadadada... or dadadadadada... . This is a sample of my own glossolalia produced while writing this paragraph. These examples show how repetition occurs at various levels of phonological structuring: sound, syllable, ‘word’, and phrase. Even after diversification is at work, repetition occurs, sometimes as complete replication of these elements, sometimes as a random occurrence of the same elements, but also in processes like alliteration or rhyme where a sound or sequence of sounds recurs syntagmatically: e.g. tów-tów. Repetition can also be combined with diversification to produce echoic words with consonantal or vocalic ‘ablaut’: e.g. gála gála, ráda ráda.

Segmentation at different points in the stream of speech is one means of diversification. Starting, for example, with the hypothetical minimal utterance dadadadaráðadarádarádarádará... in which the second ‘word’ is produced by placing juncture after rather than before the reduplicated syllables dára. The placement of the cuts may be motivated by the speech contour which may call for a stressed syllable where it occurs. This is the kind of thing one does, of course, when one carries
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by a number of other phonologically similar sounds. The permutations seem to involve consonants more than they do vowels.

This type of paradigmatic diversification always seems to be concentrated in a few words.

The incidence of these incipient lexemes is sometimes very high in a text, and it is reasonable to hypothesize that their presence — heard by the speaker — gives the discourse some of its similarity to language. In fact, some of my respondents argue that their glossas are languages by alluding to these elements that they call 'stems'. However, there is no evidence that these 'focal words' are ever associated with meaning. If any meaning is isolated at all, it is in connection with situations. (More is said about meaning below.) But this kind of differentiation may be a later development in the evolution of a pseudolanguage. A much earlier one is the simple introduction of unrelated sounds. Thus, to our original utterance

dārā, dārā, rādā, rādā, rādārā

we might get

dārākā rādākā rāmākā . . .

by the introduction of k and m. Although we do not know why just these two sounds were added to the inventory of my glossa — no more than we know why d and r were the first two consonants — it is likely that they came in to reduce the amount of repetition that was taking place. The ingenuity of the speaker is severely taxed when he is limited to a small inventory of sounds.

After the emergence of lexemes, further diversification takes place by rearrangement. (This may arise early in the history of a pseudolanguage, but when the phonological inventory is limited, it is not quite so apparent. In any case, it may not become a more-or-less consciously used process until the evolution is somewhat advanced.) Thus in dārā kārā there is a metathesis of the syllables da and ra. Because metathesis seems to take place most often syntagmatically, it might be called a case of 'dissimilated repetition' which is otherwise manifested by the change of (usually) one sound, like rākā rādā instead of rākā rākā in rādākā mārā, rākā rādā . . .

After this stage has been reached, a pseudolanguage cannot advance much further. With the introduction of more sounds, however, there will result a greater variety in the phonological constitution of the words; that is, redundancy will be reduced. Perhaps an increase in phonological complexity will also characterize advanced glossolalia, but this is not clear from the data we possess. Some religious glossolalists with years of frequent practice still use syllables of very simple structure with a restricted inventory of sounds.

The foregoing remarks have depicted a kind of progress in the evolution of a pseudolanguage, but this is only on the phonological level. Where evolution really counts is in the emergence of a semantic system that is correlated in some way with the phonological one. Of this kind there is virtually none in

The result of this varying segmentation is obviously a number of pieces of speech that look like words. There is every reason to believe that they are in fact treated like words, because there is always a number of strings that recur as units. In our hypothetical glossa these would be dārā and rādā. They might be considered stems. Like the original dārā, they would attract other syllables to themselves to form new 'words'.

Although the emergence of 'words' is definitely part of the evolution of a pseudolanguage, it is difficult to imagine how a pseudolanguage without a semantic system could ever evolve to a point where the majority of the 'words' would have a constant form. For this to happen, the glossolalist would have to remember what he had produced previously with considerable consistency. But glossolalists remember little except perhaps the opening or closing phrases of their discourses and some 'words' that may recur with greater frequency. Otherwise, they (and again only some of them) can report only on what they have immediately said. This is to be expected, since glossolalia is behavior that depends very little indeed on reflection.

This prelexemic nature of glossolalia is revealed in the difficulty that many glossolalists have in transcribing their utterances. It is clear from their transcriptions that they have difficulty in deciding whether to leave some of their syllables in isolation or to link them to adjoining words. This is corroborative evidence for what is said above about varying segmentation.

The second outcome of this segmentation is taking stress from the intonational system and putting it into the emerging lexemes. One might say that stress is 'phonemicized' because it distinguishes — for example — dārā from dārā. This is not to say, however, that the two systems always end up being neatly differentiated, although an advanced stage of pseudolanguage might be characterized by greater differentiation between the two systems. This would be possible, of course, only if there were a larger inventory of lexical units. But in this history of a hypothetical language we have not yet arrived at that point. What we must expect, I think, is a tendency for the intonational and segmental patterns to coexist with influence going on, perhaps, in two directions. Differentiation is also achieved by the introduction of new phonological elements. One common device might be called 'phonological clustering'. It consists of the permutation of one sound in a 'lexeme' (or 'cryptolexeme')

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The use of glossolalia is (as to speed, volume, intonation, and apparently for some people—phonological inventory) to express emotions. For example, the religious glossolalist starts out by addressing God in tongues, but if he is a member of a group where glossolalic ‘messages’ are also given (with ‘interpretation’) he may acquire other functions for his glossa. This is evolutionary advance in Hymes’ sense of the term: there is greater variety in speech activity. It is appropriate to use the term evolution in connection with the development in the number of phonological units, because of the emergence of word-like elements, and because of the increase in freedom of distribution of these elements. There is some advance also in the direction of semantic and definite advance in the use to which the pseudolanguage is put. This evolution is both helped and hindered by metalinguistic notions. Language is. (How this would be manifested in languages other than European may vary well be some innate principles at work. At the lowest level there varying in length; and there is some evidence for the priority of intonation and pitch in this segmentation. Another such principle might be the tendency to manipulate repetition in a variety of ways.

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Finally, there may be some enlightenment in the study of glossolalia on the emergence of human language, but I have not said anything on this subject. That topic may be taken up on another occasion.

WORKS CITED

Aquila, Sister Mary 1967 The ‘People of the Spirit’: An Independent Church in Rhodesia, Africa 17, 203-19.


Goodman, Felicitas D. 1969a Glossolalia: Speaking in Tongues in Four Cultural Settings, Confinia Psychiatrica 12, 113-129 [Basel, Switzerland]. [This is substantially the same as the following article.]


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2. W. Cohn (1967, 1968) also experimented with the production of glossolalia by trying to induce it through the stimulation of intense drumming of a Caribbean type. Having seen the filmed documentation of this experimentation (for which we are very grateful), I am not at all convinced, in spite of Cohn’s testimony and that of a single Pentecostal preacher, that the utterances produced by the subjects were truly glossolalic. There may have been one short utterance, but it is difficult to know for certain since the sound recording was not of high fidelity.

3. My assumption is that differences in performances have a psychological basis and that the ease or difficulty experienced in producing glossolalia are related to the individual’s acquisition of other skills. Perhaps the speaker who soars forth in pseudolanguage is also the person who has greater freedom in mimicking utterances in some foreign language. I have considered the possibility of using glossolalia to test language-learning ability (correlating it with scores from the Modern Language Aptitude Test) and to teach people how to break down their reserve, but have not had the opportunity to do so. I must confess that in spite of my claim that anyone can speak in tongues (except for psychological inhibitions), I put off experimenting with glossolalia for a long time. It was not until I found myself in a mild altered state of consciousness, induced by concentration on the reflection of light on leaves and water in a park, that I realized that I was free enough to do something strange. I am satisfied that I spoke in tongues, and I was fluent (more or less so) only as long as I did not think about what I was actually doing.

4. The transcription with translations follows that provided by Sister Aquina in personal correspondence except that here each series of words ending with a period is set on a new line. The material within parentheses indicates the English translation of what was said in Shona but no longer in Sister Aquina’s notes.

5. The fact that glossolalists unconsciously monitor their own speech behavior and store up certain images in their memory is very important to the study of pseudolanguage. This fact requires that people who insist on the trance concomitants of glossolalia modify their views. One recent sociolinguistic description of Caribbean Pentecostalism goes so far as to claim that glossolalia is produced by trance (Goodman 1969, criticized in Samarin 1969a and b) and one of the evidences for this interpretation is, according to this view, that people cannot remember what they have said. There is so much contrary evidence, evidence that isolates glossolalia from motivations in altered states of consciousness or pathological psychological conditions like schizophrenia, that these views must be rejected as antecedent. Any empirical investigation in the future that purports to establish a causal relationship between ASC and glossolalia can be suspected of being ad hoc, that is, describing a particular set of behavior that is not representative of glossolalic behavior in general. Any valid accounts for the behavior of one of my own respondents: he talks to himself in tongues while testing new aircraft in the air.

6. Perhaps intonational contours are necessary to the generative process as was suggested by the fact that a religious glossolalist with whom I conducted some experiments was unable to produce glossolalia in a monotone; he could initiate an utterance, but he could not keep it up. On the other hand, slowing down the rate of speech did not affect production at all.