1. Subject, assumptions, definitions

This paper deals with the relationship between the structure and the function of Pennsylvania German in the language ecology of a speech community or repertoire community as defined by Gumperz and Kloss. More specifically, it focuses on the relationship between the functional (in)stability of that variety on the one hand, and its structural (in)stability on the other.

The term "function" as it will be used here differs from its use in Martinet's theory of language change, in which "function" is conceived of as the relationship of one linguistic item to other linguistic items. Our use is as follows: (1) "Function" is defined as the relationship between one set of elements of one kind and one set of elements of another kind, i.e., as a relationship between a set of linguistic elements and a set of language external factors. This set of language external factors is roughly equivalent to what Haugen called "the ecology of language." (2) The term "function" is not applied to the micro-level of linguistic features and individual language external factors, but rather to the macro-level of linguistic repertoires with their varieties and their relationships to clusters of social categories and to clusters of unalterable natural "givens," such as climate, soil, and regional populations. (3) The relationships between the linguistic varieties and the extralinguistic social and natural factors can be interpreted as vectors, varying with regard to their direction: A can influence B, B can influence A, and A and B can mutually influence each other. The case under investigation leads us to use the term "function" with a bias, insofar as it implies the notion that the descriptive results can be adequately interpreted even when the relationship is seen as a predominantly unidirectional vector: The language characteristics, i.e., the structure, of a group's linguistic
repertoire with its varieties are to a large degree a function of the language external factors of the social and natural environment of the repertoire. The language characteristics of an individual are, in turn, to a large degree a function of that individual's adaption to his/her relevant environment: family, neighborhood, region, etc.\textsuperscript{4} That is, we subscribe to the priority of function over structure.

... man is a social animal and the structure of language is determined and maintained by its use in society, self-expression by means of language in particular is very largely controlled by socially imposed and socially recognized norms of behaviour and categorization.\textsuperscript{5}

Only a careful reading of the above quotation can prevent the false conclusion that social structure directly determines language structure, and the equally false conclusion that the magnitude of social change directly determines the magnitude of changes in the linguistic structure. Embedding Lyons' statement into role theory one might say that a society imposes recognized norms on the instrumental and verbal behavior of its members and may stipulate expectations as to which role must be realized in which verbal style. In this way the verbal style assumes the status of a role attribute. In monolingual societies such stylistic expectations can be seen to be attached to the roles of the judge and the defendant, the examiner and the examinee, the officiating priest as the agent of the institution "church" and the clients of the same institution. The role does not count as played unless it is performed in the appropriate style, i.e., with the appropriate role attribute. The role attribute is thus modeled as the interface between social structure and modalities of verbal behavior. In multilingual societies such stylistic expectations may extend to the choice of the variety that is appropriate for certain roles or role bundles. As long as a society stipulates that certain roles need to be played in certain varieties, these varieties remain functional in certain domains, and they remain a component of the linguistic repertoire. However, this does not imply that such a variety remains of necessity structurally stable. On the contrary, functional stability of a variety may be bought at the price of structural change of the old instrument as it is flexibly adjusted to novel communicative needs. Pennsylvania German among the Old Order Amish (OOA) appears to be a case in point.

2. Goal and heuristic model

This paper seeks to show that the structural changes which Pennsylvania German among the OOA has undergone in the last 250 years are not indicators of a lamentable structural decomposition of the "pure" original under the "corruptive" conditions of a language-contact situation, but rather that the changes are indicators of a successful attempt of a speech community to adjust flexibly a societally indispensable variety to changing communicative needs. The basic hypothesis is as follows: The institutionalization of PG as an attribute of a certain set of roles has guaranteed that PG has somehow remained functional in the social action system. The type of communicative needs for the effective
Diagram 1: Heuristic model of relevant ecological factors

- **Direction of time flow**
- **New Testament**
- **Dordrecht Confession of Faith**
- **Church discipline (Ordnung) \( t_1 \)**
- **Church discipline \( t_2 \)**
- **Value orientations**
- **Social action system \( t_1 \)**
  - **Instrumental**
  - **Interational needs**
  - **Verbal system**
    - **Functional**
    - **Structural**
- **Social and natural environment \( t_1 \)**
- **Social action system \( t_2 \)**
  - **Instrumental**
  - **Interational needs**
  - **Verbal system**
    - **Functional**
    - **Structural**
- **Social and natural environment \( t_2 \)**
performance of these roles determined how PG had to change structurally in order to fulfill the communicative functions it was assigned.

As the present authors have stated in an earlier paper, it is assumed that this hypothesis—before it can be subjected to quantitative measurement—needs to be assessed in an attempt (a) to model assumedly relevant linguistic elements and extralinguistic factors as components of a sign-ecological system, and (b) to discover interrelationships among such components, and (c) to determine tentatively their directionality and weighting. The goal of this heuristic procedure has been achieved if it produces a better understanding of the phenomenon, an understanding that permits the construction of more sophisticated research designs, hopefully of a quantitative nature.

Diagram (1) reflects the basic components and relationships of the heuristic model. For space reasons, the “value orientation” cell of the etic heuristic grid has been filled with OOA specific, i.e., emic, value tables. The direction of time flow is from left to right. The basic components are the value orientations, the unalterable givens of the social and natural environment and the social action system. Their relationship is construed in the following way: The social action system at $t_1$ is the resultant of the mutually determining factors of value orientations on the one hand, and of the unalterable givens of the social and natural environment on the other. Ideally, the value orientations alone would determine the social action system, yet the unalterable givens of the social and natural environment (climate, soil, urban/rural setting, urban development, population, infrastructure, language acculturation pressures) may be in disharmony with the value orientations. In the case of the OOA this potential discrepancy is taken care of in the local *Ordnung* ‘church discipline’ which interprets the unchanging values of the New Testament and the Dordrecht Confession of Faith in the changing contexts of the unalterable givens. In the event that the discrepancies between the unchanging values and the unalterable givens cannot or can no longer be reconciled, individual or even total migration may be the response (cf. below).

The assumedly relevant constituents of the social action system require further attention. With reference to the unchanging values on the one hand and to the environmental givens on the other, the local *Ordnung* defines the positively and negatively sanctioned interactional realms such as the family, the church district, the settlement, parochial schools, the fellowship and affiliated churches, and the permissible realms of the mainstream contacts. These realms and their obligatory/optional/forbidden roles constitute what we call the instrumental action system.

In order to explain functional stability and structural change from a socio-cultural perspective, we need to derive the concept of “interactional needs” from the instrumental action system. Basically it determines the interactional realms, and separates the interactional needs from the non-needs. Consequently, we define the interactional needs as the set of all interactional interests of the individuals of the community plus the interactional interests of the community as such, as far as they are sanctioned by the value tables.
The next constituent, i.e., the linguistic system, is related to the above constituents as follows. The role system does not only attract expectations as to what the incumbent of a certain role has to do, but also expectations as to how the incumbent of a certain role has to be and as to how he has to perform a certain role. The latter expectations are role attributes such as sex, age, marital status, qualifications, appearance, posture, and linguistic modalities. Unless the relevant role attribute expectations are met, the behavior does not count as the performance of the role. As was stated above, in the case of multilingual speech communities the role attribute expectations may extend to the choice of the appropriate variety. That is, the role system may determine in which interactional domains and roles a variety is functional, and in which it is not. If such expectations are part of the role system, they determine the functional distribution of varieties over the role bundles of interactional domains. The resultant distribution of varieties over roles is complementary, and the choice of one over the other by an interactant is meaningful socio-culturally. If such expectations are not part of the role system, the distribution of varieties is equivalent. In their quality as role attributes, the varieties are free variants of each other. Socio-culturally, the choice of one over the other is meaningless. In this case the varieties are not anchored in the social action system. At best, their use is governed by habits or customs, not, however, by mores. The constituent "functional linguistic system" reflects these assumptions in our heuristic model.

The last constituent, i.e., the "structural linguistic system," reflects the following assumptions. Each role to be played effectively has connected to it certain communicative requirements. Some roles, as, for example, that of the salesman, require a wide range of verbal and persuasive skills; the role of an auctioneer requires an extreme tempo of delivery; the role of the deacon in an OOA church service requires the skill of reading out the stipulated sections from the Bible. In a multilingual community that stipulates which role must be performed in which variety, this very functional distribution may have long-range consequences for the structure of the varieties. In order to function as the role attribute of a certain set of roles, one variety may only be available in those language skills that are needed for the appropriate performance of these roles; another variety may have to expand structurally; a third variety which is usually used in formal roles may develop all the signs of a formal and standard variety. In those bilingual communities in which variety expectations are not part of the role system, and in which—consequently—the distribution of varieties over roles is equivalent, the structural distinctness of the varieties is dysfunctional on the synchronic plane. Diachronically, the principle of least effort may lead to a preference and maintenance of that variety whose structural elaboration permits the playing of the greatest number of roles; as a rule, this should be the standard variety of the mainstream culture.

The social action system $t_2$ in the linguistic model differs from the $t_1$ system only insofar as it is constituted in the interplay of the value
orientations and the unalterable givens of the social and natural environment plus the experiential input of t₁.

3. The case: Pennsylvania German in the context of an Old Order Amish settlement

In order to assess the validity of the assumptions in section one and of the heuristic value of the model suggested in section two, the concepts of the sign-ecological paradigm were applied to what we assume to be an exemplary case of a sign-ecological system. This requires the listing of not overly exciting extra-linguistic factors and linguistic facts of the social action system. In a second step, these data will be interpreted as determinants of the sign-ecological system. This will be done with reference to the value orientations on the one hand, and the unalterable givens of the social and natural environment on the other.

3.1. Relevant components of the social action system of the isolate

3.1.1. Regional distribution

For January 1978 the criteria of (a) shared socio-religious orientation⁷ of (b) shared speech repertoire⁸ with the varieties American English (AE), Pennsylvania German (PG), and Amish High German (AHG), of (c) shared non-verbal repertoire with a semiotic system of grooming, garment⁹ and (Ohio) buggies, and of (d) regular and frequent interaction isolated an intersection of these sets of about 1300 persons born to 170 families with OOA household heads in Kent County, Delaware. The actual total is estimated to be about twenty percent lower, due to the migration of younger persons and abandoned affiliations. The 170 households were distributed over a rural area measuring eight by twelve miles between Dover, the state capital, in the east, and the Maryland stateline to the west (cf. diagram [2]). A comparison of the OOA population with the total population of Kent County Enumeration Districts (EDs), 11, 15, 16, 17, 52, and 53—which cover the OOA settlement area—shows that the OOA represent a minority of less than thirteen percent of the population of these EDs.

3.1.2. Socio-economic distribution

For 164 of the total of 360 males between fifteen and sixty-four years of age the occupations could be established. As a rule these 164 males are among the 170 household heads.

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>farmers</td>
<td>70</td>
<td>42%</td>
</tr>
<tr>
<td>carpenters</td>
<td>37</td>
<td>22%</td>
</tr>
<tr>
<td>masons</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>sawmill-operators, -owners, -managers</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>small shop owners (cabinetmakers, machine repair shops, buggy and harness shops, watchmakers, general stores, etc.)</td>
<td>10</td>
<td>6%</td>
</tr>
<tr>
<td>other permanent occupations (blacksmiths, timbermen)</td>
<td>13</td>
<td>8%</td>
</tr>
<tr>
<td>other, mostly younger men with changes in occupation</td>
<td>15</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>100%</td>
</tr>
</tbody>
</table>

128
Diagram 2: Regional distribution

BOUNDARIES OF CHURCH DISTRICTS IN 1978
TOTAL = 170
If one classifies the seventy farmers, the thirteen sawmill workers, the thirteen blacksmiths and timbermen as persons with agrarian occupational orientations, and if one takes the sample as representative of the occupational orientation, one can extrapolate that fifty-nine percent of all occupations are agriculturally orientated. This percentage must be assumed to be even higher because some of the persons summarized in the residual category of “other changing occupations” must also be assigned to the general category of “farm-related occupations.” For the sake of brevity and contrast we will compare these figures with those of the “unalterable factors of the social and natural environment,” although—systematically—they are in place in later sections. A comparison of these figures with those for Delaware throws the agrarian orientation of the OOA into a distinctive profile. A careful extrapolation of available figures permits the statement that in 1978 only 2.3% of all Delawarian breadwinners held farm-related occupations; i.e., the respective percentage of the OOA is about twenty-five times higher. The family farms are either owned or run on the basis that aims at the purchase of the farm operated or another farm: one-third share tenant, one-half share tenant, cash tenant. Persons in non-agricultural occupations as a rule pursue their trades in order to accumulate the capital needed for a self-employed agrarian occupation, ideally that of a farm owner. Dual job holding such as farmer-watchmaker, farmer-cabinetmaker is a frequent occupational pattern.

The technology of the economic system is characterized by the absence of modern farming equipment such as milking machines, combine harvesters and tractors for pulling purposes. Antiquated tractors with steel-rimmed wheels are only used for belt power applied to threshing machines, conveyer belts and silo-blowers. Ohio type buggies take the role of automobiles. The energy used is characterized by non-use of mains or self-produced electricity. Fossil fuels (petrol, diesel, bottlegas, etc.) are only used for the tractors, washing machines, lighting, and rarely for milk coolers and cooking ranges. Scrapwood from sawmills, carpenters, construction or demolition work provide the standard cooking and heating energy. Windwheels and a few waterwheels power the pumps that provide the drinking water, cleaning water and the cooling water for the spring house. Horses (no mules) pull the farming equipment, the utility vehicles and the buggies. An extremely important source of energy is human labor; long working hours at a high working speed strike the outsider.

From the economic perspective, the settlement can be subsumed under Ortiz' category of "peasant economy." His criteria of peasant economies are all met in our isolate. According to Wolf, peasants are farmers who produce a wide variety of things predominantly for their own household rather than one or two cash crops for the general market. Firth does not focus on only the goal of production but also on the method of production. To him peasants are a system of small producers who aim at the production of their own supplies using simple technology. Thorner considers peasant economy as an agricultural economic form in which the family and the household are the basic unit.
Diagram 3: Population pyramids

AMISH PEOPLE IN:
1978

POPULATION OF
KENT COUNTY IN:
1970

131
of production. All these concepts of peasant economy are adequate descriptions of the economic system in our isolate.

3.1.3. Demography

The human labor that is needed in such a peasant economy is sufficiently available. Again, we include a comparison with the surrounding non-OOA culture for the sake of contrast and brevity; systematically this comparison belongs to later sections. A comparison of the population pyramids of the OOA with the overall Kent County population, including the OOA, reveals the distinctness of the group's demographic profile. While the OOA population pyramid is almost idealtypical, that of the overall population deviates considerably from the natural ideal. Note that in the age-groups of 0-9 years the OOA numbers are 1.5 times higher than the overall numbers, and that in the age-group of 65 plus the OOA population is only half as large as that of the overall population of Kent County (cf. diagram [3]).

These distinctive population pyramids of Kent County and a subcultural segment of that population have their equivalence in the respective crude rates of natural increase (CRNI). The OOA have a CRNI of +38.2 per thousand per year as against +6.6 for all Delaware.

3.2. Biological continuity as a prerequisite, and interactional needs as a determinant of the functionality of the varieties of the verbal repertoire

At this point one might either continue a purely descriptive listing of the other components of the behavioral surface phenomena of the social action system, and later interpret these surface phenomena with reference to the value orientations and the givens of the social and natural environment, or one might interpret the facts presented in 3.1 with reference to the value and environmental factors and model them—with reference to the value and environmental factors—as a major determinant of the language ecology system. We opt for the second alternative because it not only leads to an understanding of static facts, but also reconstructs the dynamics of the language-ecological system and permits some assumptions with regard to its diachronic development.

In a first step we try to understand the functional stability of the variety PG with reference to the value orientations. In the given case the functional stability of PG is assumed to be dependent on two language-external factors: (1) the biological continuity of the group, and (2) the degree to which the interactional needs of the present and future members of the group can be confined to presently institutionalized and sanctioned interactional needs.

3.2.1. Biological continuity

The distribution of the members of the repertoire community over the age groups was shown to be ideal-typical. Two values render this distribution plausible. The normative exclusion of birth control accounts for the almost ideal-typical shape of the population pyramid. The principle of non-resistance accompanied by rigid conscientious objection makes the male side of the pyramid absolutely ideal-typical. The CRNI
of +38.2 per thousand per year is a good indicator of an exceptional population growth. Even if one assumes that every third child might join other Mennonite groups in the area or "high churches" of the mainstream society, a net growth of 25.4 per thousand per year can be expected. In view of the rising prices for farmland in Kent County, this increase is in fact so high that it triggers a migration to daughter colonies in Kentucky, Ohio, Ontario, and Paraguay. Essential values of the orientation tables can no longer be reconciled with unalterable givens of the area. At the same time all this means that the biological continuity of the settlement is more than guaranteed.

3.2.2. Interactional needs

Given the minority situation of the OOA (thirteen percent of the regional population) the functionality of AE is self-evident. The value tables permit only the unavoidable interactional contact, yet the AE-speaking areal majority is an unalterable given of the social environment. Thus the question of a maintained functionality applies only to the varieties PG and AHG. It was Kloss who presented the longest list of factors that may influence functional maintenance of German varieties in America. If one neglects his ambivalent factors 7-15, the following six factors remain:

1. religio-societal insulation;
2. time of immigration: earlier or simultaneously with the first Anglo-Americans;
3. the existence of language islands;
4. affiliation with denominations fostering parochial schools;
5. pre-immigration experience with language maintenance efforts;
6. former use as the only official tongue during pre-Anglo-American period.¹⁵

Instead of testing the applicability of these criteria to the repertoire community (as far as we can see, each except number five applies), we attempt to model the community's sanctioned interactional needs as the basic factor of functional maintenance of the German-based varieties.

An excursus into the theology of the OOA will reveal the value orientations that determine the sanctioned interactional needs of the community. In their historical self-interpretation, the repertoire community perceives itself as a brotherhood that stands in the tradition of the earliest Christian congregations; this brotherhood of true believers has to live in harmony with God's nature, yet in strict separation from those persons who have not taken God's word seriously. This idea of the pure brotherhood is in the center of rudimentary Anabaptist theology. The term Gmee reflects the identity of the religious brotherhood, of their congregation in the church service, and of the social community. The power of the resultant norm of concentrating as much interaction as possible on the community, but to limit outside interaction to a minimum, is reflected in the descriptive findings of 3.1 and some other facts which will be added here.

The distribution of the 1300 persons over only twenty family names is an indicator of two norms which restrict interaction: the principle of
endogamy and the restriction of outside missionary work. Here we have one of the rare cases in which race, genetically defined, shared culture, and a common language (repertoire) coincide.\textsuperscript{16} The above principles imply that in intra-group interaction there is no need to give up PG and AHG; both can remain functional because the community comprises—with rare exceptions—only persons who have been socialized within the community. The first requirement for converts is the acquisition of these varieties, which serve as markers of socio-religious identity, which—given the areal minority situation—cannot be sought in terms of spatial patterns, such as in the European village.

The distribution of the household heads over occupations is likewise an indicator of a norm restricting outside interaction: On the ideal family farm the community can be more effectively protected from outside influences than in a city environment. At the same time the family farm creates optimal conditions for the formative primary socialization of the children.

The secondary socialization is handled in the parochial school system, which is again a perfect protection from outside influences.

The absolute prohibition of owning modern technology and the conditional use of such technology relates to three areas: The absolute taboo on telephone, radio, television, and recorders limits group-transcending contacts and excludes frequent or permanent influences of the mainstream culture. The fact that the ownership of automobiles is forbidden limits the everyday radius of interaction to the district of the settlement. The regional spread of the church districts and the principles governing the reorganization of districts where the membership exceeds certain limits bear witness to the same intra-orientation. With regard to the economy, the restriction of modern technology can be interpreted as a measure that is to prevent the intrusion of the profit principle that might threaten the principle of solidarity. The implicit and explicit restriction of interaction with the outside mainstream society is complemented by the commandment of frequent intra-group interaction: Regular participation in church services, mutual help and frequent visiting are crucial norms.

4. Functional stability of the repertoire-varieties

Here we resume our earlier assumption that the roles that may and must be played in the various interactional realms do not only attract expectations as to what the incumbent of a certain role must do, but also expectations as to which variety of the verbal repertoire the incumbent of a role has to use. Diagram (4) reflects the results of several months of participant observation and a questionnaire-based survey. The religiously motivated restriction of the interactional needs of the community creates a large set of roles, which—from the perspective of information exchange—might be played in English, because every fully socialized member commands that variety. However, the attribute expectations appear to be strong enough to associate certain varieties with certain roles. The preference of one over another is not a question.
Diagram 4: Distribution of roles and role attributes (linguistic varieties) over interactional realms

<table>
<thead>
<tr>
<th>Interaction with the mainstream society</th>
<th>Interaction within the fellowship network</th>
<th>Interaction within the affiliation network</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>all roles</strong></td>
<td><strong>written roles</strong></td>
<td><strong>oral roles</strong></td>
</tr>
<tr>
<td>applicant</td>
<td>scribe</td>
<td>Zeugnisgeber</td>
</tr>
<tr>
<td></td>
<td>letterwriter</td>
<td>English and mathematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>professional roles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>neighbor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>teacher and learner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(except AHG-teacher)</td>
</tr>
<tr>
<td>customer</td>
<td>customer</td>
<td>teacher</td>
</tr>
<tr>
<td></td>
<td>diarywriter</td>
<td>(except AHG-teacher)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>father</td>
</tr>
<tr>
<td></td>
<td></td>
<td>precentor</td>
</tr>
<tr>
<td>defendant</td>
<td></td>
<td>mother</td>
</tr>
<tr>
<td></td>
<td></td>
<td>reciter</td>
</tr>
<tr>
<td></td>
<td></td>
<td>child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vorsinger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>preacher</td>
</tr>
<tr>
<td></td>
<td></td>
<td>AHG-teacher and learner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>playmate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AE</th>
<th>AE</th>
<th>AHG + AE</th>
<th>AHG</th>
<th>AE</th>
<th>PG</th>
<th>AHG</th>
<th>AE</th>
<th>PG</th>
</tr>
</thead>
<tbody>
<tr>
<td>135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
of exchanging cognitive but social information and the continual affirmation of "we-ness." In the intra-group network, the varieties PG and AHG are functionally stabilized via norms, and the use of AE is merely the response to an unalterable environmental factor. The distribution of the AE roles and the PG/AHG roles over transactional personal roles is a further indicator of the stability of the German varieties:

(a) in the AE mainstream network only a few roles are played, and they are transactional in nature;
(b) in the affiliation network more roles are played, of both interactional (AE) and personal (PG) nature;
(c) most roles of the overall role repertoire are played in the fellowship network, and all are primary roles in nature.

Except for the teacher-student roles they are performed in PG or AHG. Only if PG and AHG are not available in the needed writing skills does AE replace them in the fellowship network. However, most written AE texts, such as letters, typically have an AHG biblical quotation of formula at the beginning and at the end as a kind of interpretational cue for the enclosed AE text. Even here social identity is signaled.

All AE roles in the mainstream network are secondary roles and are limited to the unavoidable transactional relationship of customer, client, seller, patient, applicant, etc. Within the affiliation network a clear separation between transactional and personal roles is difficult: Qua close or distant relatives, they are no clear outsiders; qua religious affiliation, they are no clear insiders. Thus between OOA and members of the affiliation network there may exist both transactional and personal roles. The choice of variety is a matter of role negotiation, and this initial insecurity as to the appropriate variety illustrates the ambivalence of the role situation.

These observations concerning the present-day situation lead to the following assumptions: 1) as long as the mainstream society does not change its language policy, i.e., as long as it does not exert official pressure toward monolingualism and as long as it does not change the + language contact and - language conflict into a + language contact and + language conflict situation, and 2) as long as the Ordnung (which defines the interactional needs) is only modified in detail, but not radically changed, the interaction networks with their roles and role attributes, i.e., varieties, will remain stable. Until then functional instability of the varieties cannot be expected. Ultimately, their functional stability is controlled by the absence of radical social change.

Our argument, which is based on the social role and the notion that the varieties of a speech repertoire can be modeled as role attributes, leads to the same conclusion that Huffines arrived at:

These communities [Old Order Amish communities] are not only bilingual but also diglossic, i.e., the languages spoken by the Old Orders fulfill non-overlapping functions, and bilingualism supported by diglossia is a particularly stable language situation.
5. Structural (in)stability of the varieties

In view of the fact that language change is universal and continuous, the relative functional stability does not imply the structural stability of each variety over a considerable span of time. The latter depends to a large degree on the specific functions a variety is assigned in the interaction system of the culture. Within the heuristic model and with reference to the case we argue as follows:

The interactional needs as stipulated by the instrumental action system lead to a definition of the roles which the socially competent members of the group must be able to play. Each role, in turn, requires that the individual incumbent command the verbal skills required for the performance of that role. In multilingual societies this may lead to a surprising distribution of verbal skills over the varieties (diagram [5]).

Diagram 5: Language skills of speaker-types

<table>
<thead>
<tr>
<th>skill</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td>listening comprehension</td>
<td>AHG + AE +</td>
<td>AE + PG</td>
<td>PG</td>
</tr>
<tr>
<td></td>
<td>PG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>reading comprehension</td>
<td>AHG + AE +</td>
<td>AE + PG</td>
<td>PG</td>
</tr>
<tr>
<td></td>
<td>AE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>written text production</td>
<td>AE</td>
<td>AE (AHG)</td>
<td></td>
</tr>
<tr>
<td>written text reproduction</td>
<td>AE, AHG, PG</td>
<td>AE, AHG</td>
<td></td>
</tr>
<tr>
<td>oral text production</td>
<td>AE, PG</td>
<td>AE, PG</td>
<td>PG</td>
</tr>
<tr>
<td>oral text reproduction</td>
<td>AE, PG</td>
<td>AE, PG</td>
<td>PG</td>
</tr>
<tr>
<td>(reciting, singing)</td>
<td>AHG</td>
<td>AHG</td>
<td>(AHG)</td>
</tr>
</tbody>
</table>

Diagram 6: Typology of varieties

<table>
<thead>
<tr>
<th>criteria</th>
<th>type</th>
<th>variety</th>
<th>remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>standardization</td>
<td></td>
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<tr>
<td>autonomy</td>
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<td>historicity</td>
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<tr>
<td>vitality</td>
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<td>+</td>
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<tr>
<td>+*</td>
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<td>standard</td>
<td></td>
<td>AE</td>
<td></td>
</tr>
<tr>
<td>dialect</td>
<td></td>
<td>PG</td>
<td>*lexicon and syntax affected by AE</td>
</tr>
<tr>
<td>classic</td>
<td></td>
<td>AHG</td>
<td>*destandardization phase</td>
</tr>
</tbody>
</table>
The skill profile, in turn, makes varying demands with regard to the structural Ausbauzustände ‘elaboration’ of the respective varieties. In Stewart’s matrix of language types, the varieties AE, PG, and AHG figure as follows (diagram [6]):

Since AHG is only used as the attribute of devotional roles in which sacral texts or institutionalized ceremonial and ritual formulae must be recited in their unaltered original form, vitality is not only redundant, but vitality is even positively functional insofar as the productivity of the variety would necessarily produce other than the sacral texts. Like Latin, AHG has been preserved from structural corruption, yet not by the normative precepts of grammarians but by its use in frozen form. Its maintenance is not so much the result of a language maintenance effort, but rather the result of maintaining a corpus of sacral, ceremonial, and ritual texts. On the whole, a comparison of the hypothetical historical and present-day state of the variety AHG supports the assumption that the reduced use of the variety will lead to a reduced skill profile and to a reduction of the structure of that variety. The structural instability of AHG is at present limited to the transference of PG phonological features and to spelling pronunciation when recited or sung. The concept of the role and its attribute appears to be a useful instrument in determining the specifics of the reduction of both the skill profile and the structure of that variety.

Diagram (4) reveals that AE is used in intergroup interaction mostly in secondary and transactional role relationships (client, patient, applicant, etc.), whereas in the intra-group network it is subject to the normative influences of the orthographic standard and/or the formal school situation. That means that wherever AE is used, it is subject to the normative forces either of the written standard, or of relatively formal roles. This makes it plausible why in terms of structure the AE of the OOA should exhibit next to no transference from PG and that it should so little deviate from the AE of the socially comparable coterritorial monolinguals, at least with regard to lexicon and syntax. If, in fact, it can be distinguished on these levels, the AE of the OOA is slightly closer to the standard norm of AE.

Even before the completion of the phonological analysis one may almost predict that the results for the OOA of Kent County, Delaware, will confirm Huffines’ findings for Lehigh, Berks, Lebanon and Lancaster Counties, Pennsylvania:

It was hypothesized that more features specifically associated with the English of the Pennsylvania Germans would be identified in the English of members of the more conservative sects and in the English of full bilinguals than in the speech of those who only understand Pennsylvania German or who are monolingual English speakers. The results indicate that these two sociolinguistic patterns do not obtain.

Raith came to the same conclusion.

With regard to PG, it should be remembered that this variety is the attribute of the majority of roles in the OOA role repertoire. This high
functional load puts high demands on the structural Ausbauzustand of the variety. The structural complement of this wide functional distribution would be the existence of stylistic options in the variety PG. Our data suggest that such options exist. However, if one assumes, in accordance with the family-tree model of linguistic change, that such options can only develop through continuous diversification of inherited linguistic items, be they lexemes or rules, the stylistic options existing in PG cannot be fully accounted for. The concepts of diffusion and convergence of the wave-theory of language change must be used as complements.

If one were to take only the variable of prosodic modality, one can distinguish three stylistic options available in PG, i.e., psalmodic style, declamatory style, and the prosodically unmarked everyday style. The existence of similar prosodically marked styles in other Old Order Amish groups suggests that the prosodic variable of PG styles can be accounted for in terms of diversification of an inherited predecessor.

The above stylistic options can be further distinguished with reference to their relative participation in diffusion of AE items into PG. For brevity’s sake we here bypass the involved theoretical question of whether or not in bilingual and diglossic situations the concept of borrowing needs to be replaced or complemented by the concept of switching. We will call any AE item used in a PG text a “diffused item,” and the variegated processes leading to such use “diffusion.” The prosodically marked psalmody and declamatory style of two preacher roles show relatively few AE items diffused into PG texts. The prosodically unmarked everyday style shows a higher degree of lexeme diffusion (7%) than non-Old Order PG texts (5%, 4%, 2.5%), even if the topic of discourse, such as the family, the community, visiting, weather, crops, falls within the referential range of the Basic Core Vocabulary (Swadesh). These figures increase significantly when the topic is farming-equipment, watch-repairing, banking, hospitalization, administration and mainstream culture in general. What from the family-tree perspective may appear as structural impurity can, however, also be seen as a most economic use of the lexicon of the AE variety as lexemic registers of the variety PG by bilingual speakers. In part, the lexicon of PG and AE of the speech repertoire are in complementary distribution. Comparing the structural and functional effects of massive diffusion of AE items into PG texts, we may say that this lexical variability destabilizes the structure of PG. However, it is exactly this lexical variability that stabilizes the functionality of the variety insofar as a growing or changing referential range can be covered in that variety. Since the phonological and syntactic base of such utterances remains PG, and since most of the diffused AE items are phonologically and morphologically integrated into PG patterns, even such utterances indicate the “we-group” origin and the cultural identity of the interactants.

What from a purely structural angle may appear to be the loss of an imputed original purity appears from a structural and functional per-
pective to be a functional gain, i.e., the creative allocation of *dual* function to one stretch of speech: An act of reference and an act of identity are performed in just one utterance. The identificational and the referential functions are normal for any text. What is abnormal here is the fact that the two functions are in part distributed over features of two varieties of the repertoire. This dual function of PG texts infused with AE items appears to be the prerequisite for playing the wide diversity of roles in the intra-group network. The destabilization of the historical structure does not necessarily lead to language death; on the contrary, we interpret it as an indicator of the vitality of the variety PG in the repertoire of the OOA in Kent County, Delaware. We would not even consider the reductive restructuring of PG syntactical rules as an unambiguous indicator of language death, as Dressler and Wodak-Leodolter appear to suggest: "Language death can therefore be looked at as a sort of pidginization . . ."  

The transition of older obligatory rules to optional rules and their convergence on AE rules reduces the total of rules in the overall speech repertoire and simplifies its overall syntactic structure. Like lexemic diffusion, the new rule type and the eventual rule loss can be taken as an instance of Martinet's principle of least effort as applied not to one language, but a speech repertoire: The process reduces the number of material lexemic and syntactic distinctions and maximizes the work that each does. Not the individual variety, but the speech repertoire with its three varieties must be taken as a semiotic system whose internal restructuring is, however, ultimately controlled and checked by the communicative functions which the speech repertoire is made to serve in the community. However, it should be noted that the synchronic variation obtaining in the repertoire is at the same time a potential for rapid diachronic change in the structure of the repertoire. Taken by itself, rapid diachronic change in the structure of a repertoire or in one of its varieties is not necessarily an indicator of language death. If this were so, the English language would have died between 1066 and 1400. Indeed, rapid change can also be a sign of functional vitality. Only dead languages do not change.  

6. Conclusion  

Structural change is a characteristic of all living languages. In those cases in which two languages form the varieties of the speech repertoire of a sizeable group of bilingual speakers, diffusion and convergence appear to be more important for the explanation of language change than the continuous divergence of the ancestral structure of the varieties. On the synchronic plane such a situation entails the availability of more options to the bilingual speakers. The number of near synonyms and of optional rules increases, and the increased number of options, in turn, presents favorable conditions for diachronic change. However, these structural conditions themselves do not permit any prediction of the direction of diffusion, and which of the varieties will change under
the influence of the other. In the case of bilingual Swedish-Americans
the diffusion is unidirectional from AE to American Swedish—as in
our OOA case only one variety is affected. In the case of the less
conservative Pennsylvania Germans, it is bidirectional (Huffines). In
the case of Kannada-Marathi, the language-contact situation that has lasted
for over a thousand years has led to a mutual syntactic convergence of
both varieties on each other so that the varieties differ only with regard
to lexemes and morphs which can fill the slots of a shared and identical
syntactic structure.

In contrast to the AE : American Swedish situation and the AE : PG
situation of the OOA, not one but both language structures were
destabilized, as in the case of the less conservative Pennsylvania
Germans. In all cases we have structural reduction of one or both
varieties concerned, and loss of linguistic items from one or both of the
historical predecessors of each variety. In terms of the family-tree
model, which tends to perceive diachronic change in terms of continu­
ous internal diversification of the inherited structure, such a reduction
and loss is likely to be interpreted as structural degeneration and
imminent structural death. However, some contact varieties have sur­
vived and others have not. From a purely structural perspective the
most puzzling case is the one in which one contact variety has survived
in one ecological embedding, but died in the context of another. The
near disappearance of PG in the ecological embedding of the New
Orders and the high church communities, and the vitality of PG in the
ecological embedding of the OOA can only be explained with reference
to the variable "language ecology."

This paper attempted to isolate the extralinguistic factors that deter­
mine the functional stability of the varieties of the speech repertoire.
Role theory was used as the central heuristic category: As long as roles
attract not only expectations as to what the incumbent of a role has to
do, but also expectations as to which variety is the appropriate role
attribute, parents will not cease transmitting to their children all the
varieties in those skills which are a prerequisite for their interactional
competence in the community. It is only through the continuous
diffusional enrichment of PG by AE items that PG can serve as a role
attribute of the majority of roles in the overall role repertoire. The
communicative needs created by the growing and changing referential
range can be covered in a variety that exploits the AE lexicon as its own
referential register. In speech islands, the functional stability of the
intra-group variety must probably be bought at the price of structural
instability and change of that variety. In this way it can serve the dual
function of covering the growing and changing referential range
through "borrowed" lexical registers, and of acting out cultural identity
through "our" phonological and syntactical patterns.
Notes


5 J. Lyons, Language and Linguistics, p. 144.


13 Cf. Ortiz, p. 323.

14 The source of these figures are the 1970 U.S. Census, quoted from Delaware Statistical Abstract (1975) and our own demographic research.


