Context and Variation in Two-way Radio Discourse

DAFYDD GIBBON
University of Bielefeld
Federal Republic of Germany

International amateur radio talk (IART) is described as a ‘clear case’ of the significance of the channel as a restrictive factor in discourse, and sample texts of IART are analyzed. The situation of IART and its subvarieties and neighboring varieties within a formal and functional ‘variety space’ is examined within a proposed theory of the use of speech. Language use is regarded as defined by a hierarchically organized set of constitutive factors, and purpose-oriented aspects of language use are included by positing an ongoing adaptive process, the ‘functional cycle’. Three constitutive systems are defined: register, genre, and style. The claim is made that ‘language use is language variation’: The assignment of specific features to the factors of use defines a functional variety, and the continuous checking and logging of indexical values defines the ongoing adaptation of speech to context.

1. IART: THE BACKGROUND

The medium of communication, ‘channel’ in Shannon’s terminology (1949), ‘contact’ in Jakobson’s (1960), is a factor in communication whose significance is often underrated. Physically, a channel is a ‘path’ through a ‘medium’ that provides the concrete realization of a link between communicants as speakers and hearers. Psychologically, different channels, whether direct or technically assisted (including writing, phoning, two-way radio, television, drumming,...) imply different processing types in planning, as well as in production and in perception. Linguistically, the channel provides strong constraints on lexical, syntactic, and discourse-strategic processes within the functional contexts of ‘redundancy-increasing’ and ‘error-correction’ (Shannon, 1949), ‘uptake-securing’ (Austin, 1962), ‘repair’ (Sacks, Schegloff, & Jefferson, 1974), and ‘control features’ (Gibbon, 1981). Socially, channels co-characterize the public or private, freely accessible or institutionally regulated status of transient encounter groupings constituted out of larger social configurations. There are significant moral issues in which taboos and sanctions are applied to channel configurations;

Correspondence and requests for reprints should be sent to Dafydd Gibbon, Fakultät für Linguistik und Literaturwissenschaft, Universität Bielefeld, D-4800 Bielefeld 1, Federal Republic of Germany.
they involve teleglossic ('distal communication') channels and various kinds of
'cavesdropper roles', in relation to the exercise of political power: phone-tapping
or letter censorship (vs. channel privacy), state or commercial control of mass
media (vs. autonomy or participant control), even the right to congregate, that is,
to constitute communicative encounters beyond minimal face-to-face groupings.

The term 'channel', then, need not refer exclusively to a physical medium of
propagation. Like other factors in the use of speech, channels have both natural
(physical, perceptual) and conventional (social and institutional) dimensions. In
face-to-face communication, the role of the channel is unmarked. Only when
noise or unaccustomed technical aids are involved and associated speech features
are functionally 'restricted', 'simplified' (Ferguson, 1977), 'routine', or 'stereotyped'
(Coulmas, 1981) does its significance become clear.

The language of two-way radio, of which one variety, international amateur
radio talk (IART), will be described here, is a 'clear case' in this respect; so
much so, in fact, that its relevance to the claims made earlier might seem to be in
doubt. That this is not so is shown by the sensitivity of amateur radio (and indeed
of 'neighboring' activities—witness the intense debate about legalization of
citizens band radio, CB, in Britain in the early 80s) to political concerns. This
applies both to constraints to use nonpolitical, noncommercial topics in IART,
and to the conditions of its existence: In some countries, amateur radio is institutionally regulated by the postal services, in others by military authorities, in still
others it is prohibited. At an international level it is in competition as an educationally oriented radio service with commercial, administrative, military, broadcasting, and other radio services for its frequency allocations, some of which are shared with, others infringed by more powerful interests. On the global scale,
IART is something more than an exotic or background activity.

On the 'local' scale of discourse conventions and speech forms, IART is
situated in a 'formal and functional space' of language variation in use, defined
along several dimensions by the constitutive factors and features of communica-
tion. The location of IART and its subvarieties in relation to neighbors in English
and other languages within this 'variety space' will be examined here within a
procedurally oriented theory of the use of speech, under the following headings:
Data samples ($\S$2); Characterization of IART discourse ($\S$3); Constitutive factors
of language use and variation ($\S$4); Constitutive systems as registers in variety
space ($\S$5); The functional cycle ($\S$6); A complex case of Uptake-securing ($\S$7);
Neighborhoods in variety space ($\S$8); Conclusion: register, genre, and cross-
language variation ($\S$9). (The sign "\$" here, and later, is used to refer to
sections of this paper.)

2. DATA SAMPLES

The data samples are given in a hybrid orthography, as phonological features of
IART vary with the speaker's mother tongue, and their variety is only relevant
here as a source of user noise. Selected prosodic features of IART are given in
intonational notation, supplemented by parentheses to indicate the integration of un-
stressed syllables into a smooth pitch gestalt. The signs ‘=’, ‘+’ mark unfilled
and filled short pauses, respectively; ‘+’ marks a neutral vowel prefixed or
suffixed to a word as a phonological clarifier (the prefixed item usually being
glottal stop plus neutral vowel). Lengthening (of vowels or consonants) is
marked by ‘:’. Strokes delimit broad phonetic transcriptions, for example, /sl/,
/el/, where ambiguity may occur (e.g., with letter ‘a’ vs. indefinite article).
Stretches of bad copy (whether due to user or channel noise) and other comments
are enclosed in angle brackets as in: ⟨...⟩, ⟨ramerzo ?⟩, ⟨sic⟩. In abbreviations
(‘ipa’), codified idioms (‘cq’, ‘qrz’, etc.), and numbers (‘59 015’), the letters or
digits are ‘spelled out’, that is, pronounced one by one with their English names,
with ‘zero’ as the pronunciation for ‘0’. Compound numbers (‘seventy-three’),
heterophonetic alphabet items (‘alpha, bravo, …’, ‘alabama, baltimore, …’) and
similarly used humorous or other ad hoc items (e.g., ‘6 whisky 8 amateur radio’
rather than ‘6 whisky 8 alpha romeo’ for ‘6w8ar’), are given in full. For explana-
ations of further details, see §3.

Sample 1
(General call; Italian then Russian. Salient features: general contact-establishing
strategy ending in Uptake loop; explicit dummy ‘question mark’ to index posi-
tion of queried information within question; non-native use of IART.)

P1: cq on 20 cq on 20 from italy = i3uk = italy 3 u uniform k kilo = italy 3 u uniform k
kentucky cq on 20 cq = this is italy /sl/ calling cq = italy 3 u uniform k kentucky =
italy 3 u uniform k kilo cq on 20 and is listening
P2: ⟨...⟩ union number 2 japan norway alpha ⟨...⟩
P1: union caller with number three question mark this is india 3 u uniform k kilo = india
number 3 u uniform k kilo by back to you

Sample 2
(Medial turn by a Scot in contact with a German. Use of paraphrastic repetition
in native-to-non-native Uptake-securing processes.)

P1: … quite a lot of people loading up ha ha (laugh) but * oh no = why very fine business
Ferdie = you’re about 10 dB over 9 here very very good signal * Ferdie from Bonn =
my equipment is a fox tango 101 zulu = the 101z and my antenna is a doublet
antenna = that’s a centre-fed zepp antenna * Ferdie. The weather tonight is about 4
or 5 degrees centigrade here = cold and misty * not very pleasant at all for a Saturday
evening * Ferdie delta juliet 3 golf echo gm3cw

Sample 3
(Contest, English and Spanish. Note appended vowel as word-delimiting clar-
ifier after ‘9’, pronounced /maina/ and written here as ‘nine+’; also informal
repair strategies after P2 erroneously re-contacts P1, and rapid formulaic transi-
tion to next encounter initiation by P1 after error correction. Routine intonation with both accented and unaccented syllables along a smooth pitch curve, especially on END processes in general calls.)

P1: ...echo alpha 5 bravo kilo = my call here is george 3 whisky yankee papa = germany 3 whisky yankee papa = your signal is five nine+ = five nine+ = ipa 122 = one hundred and twenty-two qst

P2: 1 qst golf 3 whisky yankee papa * this is echo alpha 5 brazil kilowatt honolulu = thank you for ipa 59122 your ** signal is 59 = 0 32 59 = 0 = 32 roger

P1: yes roger roger = are you with the ipa = are you an ipa member or not = go ahead

P2: i not ipa member roger

P1: okay it does not matter = it does not matter but I I was just wondering if you were with the ipa or not = okay seventy-threees * qrz contest george 3 whisky yankee papa stroke alpha calling (long pause)

* cq ´contest = cq ´contest cq ´contest cq ´contest cq ´ipa ´contest = cq italy papa alpha ´contest cq ´ipa ´contest 3 whisky yankee papa stroke /el/ calling ( ´contest and ´by)

P2: please my friend you have ipa number roger

P1: * ipa is five nine+ = five nine+ = ipa one two three = one two three = five nine+ one two three what is your callsign please

P2: * my my call is echo alpha 5 baker king henry (…) then you must be too = five nine = one two two * my (laugh) three (laugh) my English very bad * your station is an ipa station roger

P1: yea your number is five nine+ italy papa alpha = 122 = I thought there was another station calling me then sorry your number is five nine+ = italy papa alpha = 122 = qst

P2: qst thank you very much I note your call in the list (laugh) david = thank you very much * I am sorry my friend

P1: yes seventy threees = seventy threees = this is george 3 whisky yankee papa stroke alpha calling cq ´contest = cq ´contest = cq ´contest cq ´contest = (cq ipa ´a contest) = george 3 (´whisky ´yankee ´papa calling) ( contest and ´by)

(long pause)

(cq ipa ´contest) (cq ´ipa ´contest) (cq italy papa alpha ´contest) (cq ´ipa ´contest) = (cq ipa ´contest) (cq ´contest) cq ´contest = cq ipa ´contest = germany 3 =) (´whisky ´yankee ´papa stroke ´a) ( contest and ´by)

(long pause).

*qrz = who’s that calling

P2: (…)

P1: yes I’m also * on 40 metres * yes = who’s calling me

(long pause)

(cq ´forty) (laugh) twenty (cq cq ´contest) (cq ´contest cq ´contest) (cq ´contest) cq ´ipa ´contest (cq ´contest cq ´contest) cq ipa ´contest cq ´ipa ´contest here is ( george 3) (´whisky ´yankee ´papa stroke ´alpha) (calling ´contest and ´by)
Sample 4
(Contest, Yugoslavian and Irish. This sample may perhaps be regarded as a minimal, even 'canonical', contest-style qso; cf. §8.)

P1: united 7 sierra fox trot go ahead
P2: yankee united 7 sierra fox trot yankee union seven sierra fox good even (sic) your report is 59015 59015
P1: roger roger 59015 your report is 59124 * yankee united 7 sierra fox trot * * yankee united 7 sierra fox trot qsl
P2: qsl and good luck

Sample 5
(Contest, Irish and German in Senegal, two relaying stations. Note the sporadic topic expansion attempts later in the qso, and clarification process with neutral vowel as delimiter, as '6 + whisky 8 ...'.)

P1: cq contest cq contest cq contest cq ipa contest cq cq contest from echo italy 8 delta kilo echo italy 8 delta kilo contest
P2: six whisky 8 alpha romeo
P1: * cq contest cq contest cq contest = cq ipa contest cq india papa alpha cq ipa contest
= cq ipa contest from echo italy 8 delta kilo = echo italy 8 delta kilo contest
P2: six whisky 8 alpha romeo
P1: the station with honolulu the station with hotel go ahead (pause)
cq contest cq contest cq contest * cq contest cq ipa contest cq contest = from echo india 8 delta kilo = echo india 8 delta kilo calling ipa contest = cq contest cq contest
cq ipa contest from echo india 8 delta kilo = echo italy 8 delta kilo contest
P2: six whisky 8 alpha romeo
P3: six whisky 8 alpha romeo
P4: echo india 8 calling for you 6 whisky 8 alpha romeo
P1: qrz
P2: 6 whisky 8 alpha romeo
P1: echo radio 6 alpha what's your prefix go ahead
P2: (... from Senegal in West Africa six + whisky 8 + alpha: romeo = 6 + whisky 8 + alpha: romeo qsl
P1: roger * 6 * whisky 8 * 6 * whisky * 8 *: amateur radio from echo india 8 delta kilo = I hope I've got * the call correct this is echo india 8 delta kilo your report is india papa alpha = 59215 59215 qsl
P2: qsl 59215 * ipa * (...) echo india 8 delta kilo 6 whisky 8 alpha romeo returning you have my * callsign correct (...) and your report is 59 + 0 + 06.59006 I am not ipa (...) 
P1: roger roger roger = 'tank you indeed = 6 whisky 8 amateur radio * it's my first 6 whisky 8 so I we're very very pleased there to be working into * senegal * senegal * so 'tank you indeed for a very nice contact 6 whisky 8 = amateur radio from ei8dk the name is Jim by the way japan india mexico = and the location is Cork city = charlie
Sample 6
(Contest, Irish and Italian. Particularly clear Uptake Loops in mid-qso. Use of glottal stop and neutral vowel as clarifying uptake-securing process: ‘59 +2 +1 +3’. Routine intonations in first turn.)

P1: (cq ‘contest cq ‘contest) (cq ‘contest cq ‘contest) (cq ipa ‘contest) (cq ‘ipa ‘contest) =
(cq ipa ‘contest) (cq ‘ipa ‘contest from) (‘echo ‘italy ‘8) (‘delta ‘kilo) (‘echo ‘italy
‘eight ‘delta ‘kilo) (calling ‘ipa contest and ‘listening)
P2: victor united seven sierra (...)
P1: * italy * zero * sugar * victor delta = you’re italy papa alpha = 5 +9 +213 5 +9 +2
+1 * 3 qsl

P2: okay echo india 8 delta italy = i 0 sierra victoria delta ipa i0svd
P1: you are an ipa station is that a roger = are you an ipa station break
(pause)

* it * italy zero sugar victor delta * italy zero sugar victor * delta from echo india
eight delta kilo = are you an ipa station break

P2: okay echo india 8 * okay ipa qsl
P1: you are an ipa station is that a qsl

P2: qsl qsl

** CHARACTERIZATION OF IART DISCOURSE

A detailed account of IART speech forms and the general research context behind the present work has been given elsewhere (Gibbon, 1981). In the present study, emphasis is on ‘use as variation’, in particular on the notions of process

oscar radio kilowatt cork city = on the south coast of the Republic of Ireland = so
seventy-threes and hope that everything is qsl 6 whisky 8 amateur radio from ei8dk

P2: okay very good Jim my name is rene romeo echo november echo = and my qsl
manager = delta juliet +3 alpha sierra = delta juliet +3 alpha sierra my qsl manager
we are (...) from Western Germany okay Jim

P1: roger roger okay fine business there fine business and * * hopefully we’ll * we’ll *
meet you again very very soon and hope that you have good luck there with the *
Sherlock Holme (sic) Award I hope you have good lucks with the Sher * Sherlock
Holmes Award and * good dx there in the contest seventy-threes and * * plenty of
German stations to you = all the best from echo india 8 delta kilo

P2: seventy-threes Jim (...)

3. CHARACTERIZATION OF IART DISCOURSE

A detailed account of IART speech forms and the general research context behind the present work has been given elsewhere (Gibbon, 1981). In the present study, emphasis is on ‘use as variation’, in particular on the notions of process
and variety space that contribute to an explanation of the properties of IART. From this point on, technical terms explained in the course of the paper will be capitalized; names of the main discourse process type have initial capitals.

A striking feature of IART is its formulaic character, to which its 'jargon' and 'repetitiveness' contribute. The 'jargon', composed largely of stereotyped and institutionally defined closed sets of idioms, was originally functional, with respect to CHANNEL constraints on brevity and maximum transitional probability to increase redundancy and thus ease of recognition in morse telegraphy. In telephony, however, they are in many cases less functional and have greater 'phatic' or group-identifying function (but see §8).

These generalised formulaic properties occur in all the major discourse process types (cf. Figure 1).

The Topic processes center on relatively fixed slots for indexical information about PARTICIPANT, CHANNEL, and SPEECH specifications; these slots also provide Topical 'leaky points' for an institutionally constrained, but still potentially infinite range of nonformulaically treated Topics. The institutional constraints derive from the 'sensitive' international character of amateur radio (§1), which distinguishes it functionally and legally from nationally defined private radio or citizens' band (CB) services, for instance.

The Framing processes fall into two main subgroups, each associated with the internal organization of specific turns, (i) Cohesive: forward and backward links with succeeding and preceding turns, and (ii) Configurative: introductory and closing. Specific aspects of Framing will be dealt with here; the complex role of Framing in IART discourse is discussed in §5.

Within the overall Control category, the Cohesive processes share functional properties of Uptake and Configurative processes; formally, they are closer to the latter, as items in stereotypic turn templates and can be seen as stereotyped Uptake items, integrated into Framing processes. They include

qsl, roger, ok, thank you for X, fine business, ...  
good morning, seventy-threes, good luck, ...
Depending on the intonation and the environment, ‘qsl’ and ‘roger’ can be forward-linking (requests for confirmation, with high or rising intonation) or backward-linking (confirmations of received information, with low or falling intonation). Where Configurative Framing is not overt, Cohesive items themselves bear the Configurative functional load, as in Sample 6 (intonation not transcribed at this point in §2):

P1: you are an ipa station is that a qsl
P2: qsl qsl

and intonation plays a prominent Cohesive role. A special use of slow pitch rises and falls occurs simultaneously as a stereotyped Configuration marker and genre marker for ‘formulaic public speech without specific ADDRESSEE’; it is also to be observed in public address announcements or in fairground patter. Conspicuous examples occur in Sample 6:

P1: cq `contest cq `contest) (cq `contest cq `contest) ... ...(calling `ipa contest and `listening)

Locutionary Configurative Framing processes belong to several types:

GENERAL: cq (SPECIFIER), qrz (SPECIFIER)
SPECIFIER: (W) `contest, dx, AREA NAME, CALL-SIGN
AREA NAME: Australia, Pacific, USA, Europe, ...
CALL-SIGN: COUNTRY PREFIX g3-, 6w8-, i3-, ea5-, eia-, ...
+ INDIVIDUATING SUFFIX -wyp/a, -ar, -uk, -bbh, -dke, ...
LINK: from, this is, here is
ROLE: calling (CALL), listening, (standing) by
GREETING: good evening, ...
FAREWELL: (so) seventy-threes, seventy-three, good luck, ...
CLOSURE: go (ahead), over
CONFIRM: (I) g3, okay, roger, fine business, thank you, yes, I’m sorry but, no, ...
CONFIRM?: qsl, roger, okay, do you understand now, ...

CALL is GENERAL or CALL-SIGN (e.g., ‘calling ipa contest’ or, not illustrated here, ‘calling w4bc’). The variable W is an ad hoc further specifier of the particular contest involved, here the International Police Association (IPA) contest in which a ‘Sherlock Holmes Award’ is given to the operator who achieves the highest number of points in qso’s with radio amateurs in the IPA. This is one of a large number of awards for various aspects of operating skill or simply encouraging intergroup contact, organized by regional clubs or suprarregional professional, education, or leisure-oriented bodies. LINK and ROLE processes have tendential co-occurrence restrictions, as in

(this is) g3wyp/a (calling cq contest)
but less acceptably

?from g3wyp/a calling contest

and other cases. There are four main types of ROLE formula: initiating ROLES like ‘calling’ (encounters) or ‘returning’ (turns), and terminating ROLES such as ‘off and clear’ (encounters) or ‘listening’, ‘standing by’ (turns). Note, too, that GREETING and FAREWELL are functionally related to CONFIRM and CONFIRM? as Cohesive processes, though they are restricted to discourse-initial CONFIRM and discourse-final CONFIRM?, respectively.

Uptake processes are more complex than Topic and Framing processes (except for Topic expansions at leaky points). Framing idioms are linear or, in the case of discontinuous idiom frames, hierarchical with linear strata and a fixed degree of depth (cf. the LINK-ROLE dependency above). Topic processes are similar. Uptake processes also involve iterative and recursive processing, however, as well as linear idioms. Iteration is applied to any process, from whole exchanges down to the spelling of individual words; note Sample 7 in §7, or Sample 6:

Cork city charlie oscar radio kilowatt cork city

Recursion, that is, use of a process during a previously initiated use of the same process, occurs with back-channel Uptake processes; they have the canonical form (‘... What? - That! - Oh. - ...’) and constitute a form of discourse embedding. Two types of recursive Uptake loop (each with internal iteration) are shown in network form in Figure 2; the upper network would be used by a PARTICIPANT with INITIATOR status relative to a given depth of embedding (cf. §7),

![Network diagram](image-url)

**FIG. 2.** Simple network representation of In-turn sections of two Uptake loop formats (initial states have broken underlining; final states unbroken underlining; illustrations from Sample 3).
while the lower one would be used by a RESPONDER. The iterative or ‘loop’ property of these processes is represented by the jump arcs back to ‘earlier’ states of the networks. Their recursive potential would be used when the Uptake loop is itself a source of Uptake problems (a detailed example of which is discussed in §7).

Linear Uptake processes include the routinized CONFIRM and CONFIRM? idioms, and also explicit metacommunicative performatives (‘I spell my name...’), spelling routines, apologies (‘sorry’, ‘my English very bad’), and various phonological clarifiers such as the use of neutral vowels before or after spelt letters or figures. The vowel concerned varies according to the speaker's native language and is transcribed in various ways for this reason. In Sample 3, for instance, it is ‘five/nain /’ (for ‘5 9’); in Sample 5 ‘6 /a/ whisky /a/ 8 /a/ alpha: rome oak 6 /a/ whisky /a/ 8 /a/ alpha: rome oak’, with lengthened terminal /a:/ on ‘alpha’; in Sample 6 it is ‘italy papa alpha 59 /o/a/ 2 /o/a/ 1 /o/a/ 3 /o/a/ qsl’.

In summary, Topic processes determine goal-oriented progression of information exchange in discourse; Uptake processes provide error-control strategies in support of them and Framing processes define orientation points within the structural and semantic development of discourse. Some error-control processes (CONFIRM, CONFIRM?) are integrated into the Framing level; some Framing processes such as these two and the ROLE processes may be backward or forward pointing, initiating or closing, and anything metacommunicative including Topic and Control processes themselves may enter into 'Topic processes. Nevertheless, the stereotypic and repetitive qualities of IART 'conspire' to reduce form-interpretation relations in IART to unambiguous, near one-to-one correspondence.

4. CONSTITUTIVE FACTORS OF LANGUAGE USE AND VARIATION

The ‘constitutive factors’ (Jakobson, 1960) of language use define a complex ‘formal and functional space’ within which the different functional varieties, styles, registers, and genres of language in use are located. In this sense, it may be said that ‘language use is language variation’, because a given assignment of detailed specifications to general parameters of language use is naturally also a decision about where to locate the variety concerned within the available functional space of verbal interaction.

Figure 3 shows the hierarchically organized set of ‘constitutive factors’, whose meanings should be clear from their position in the factor tree. This basic system will be extended in §5 and §6. The factors P1 and P2 specify the typical dyad of IART encounters; to account for the relay exchanges of Sample 5 it is necessary to specify a PARTICIPANT set greater than a dyad. Members of the PARTICIPANT set are specified for further communicative roles (§5).

The functions of SPEECH in use may be defined as relations between
SPEECH and CONTEXT and, if desired, as teleologically interpreted relations between PARTICIPANTS and their ENVIRONMENT: social functions in relation to the realization or creation of relations among PARTICIPANTS, phatic functions in relation to the selection, use, and maintenance of a CHANNEL by a particular encounter group (for ludic, aesthetic, religious, information consensus purposes), and the development of discourse Topics in relation to a SETTING. The notion of 'process', too, is definable over the factor PARTICIPANT, from a group or an individual perspective (see below and §6).

In the functional space defined by these factors, IART has group-constituting functions (largely of male, non-third-world, specially qualified adults), consensus-attaining and ludic functions (as part of an educational hobby), with Topics from a restricted metacommunicative SETTING. Other neighboring varieties have different functions: commercial radio traffic is non-ludic, and constitutes different PARTICIPANT groups for different purposes; group-constitution is less restricted in the case of other technically assisted CHANNELS such as CB radio, less still in the case of the telephone. Writing, a technically assisted CHANNEL with trace storage properties, covers an area of functional space that shares some of the specifications of radio communications, but differs in others (see §8).

It has often been suggested that there is a finite number of constitutive factors, from 4 (Bühler, 1934) to 14 (Hymes, 1972); the hierarchy of factors postulated here harmonizes with these views, but it suggests more structure for the factor inventory, and is supplemented by further descriptive category types (§5, §6). Whether there is also a finite number of functions of SPEECH, as has frequently been suggested (see Bühler's (1934) three: 'expressive', 'appellative, representational'; Jakobson's (1960) six: 'emotive, conative, referential, metalingual, phatic, poetic', 1960, or other inventories including 'effective/perlocutionary', 'interaction-constituting/illocutionary', 'meaningful/locutionary', or 'group-constituting', and others) will remain unanswered here.

A criticism of Praguean 'relational' functionalism as adopted earlier in modified form has been that it does not bring out the dynamic aspects of purposeful language behavior and thus does not yield genuinely functional explanations. It is necessary to separate two aspects of the concept of functional explanation
here, however. It is by no means necessary for ‘functional’ to mean ‘teleological’ or ‘final’ explanation; it may also mean ‘embedded in a contextual matrix’, a structural conception where a function is related in principle to grammatical functions: ‘subject’ is a function of nominal expressions in a sentential context, ‘object’ a function of nominal expressions in a verb phrase context, and so on. Similarly, ‘appeal’ is a function of utterances in the CONTEXT of an ADDRESSEE, ‘representation’ is a function of an utterance in the CONTEXT of a concrete SETTING, ‘play’ is a function of an utterance in the CONTEXT of a specific PARTICIPANT group in a specific SETTING.

The two interpretations of ‘function’ are not mutually exclusive; the ‘final’ interpretation presupposes the structural conception, involving additional explanation of PARTICIPANT roles and status, intentions and expectations, and of the processes in which PARTICIPANTS participate (see §6).

5. CONSTITUTIVE SYSTEMS AS REGISTERS IN VARIETY SPACE

The set of constitutive factors provides a basis for defining registers as finely structured areas of variety space with natural (physical and perceptual) and conventional (in part also institutionalized) properties and relations (cf. Searle’s ‘brute’ vs. ‘institutional’ fact distinction, 1969, p. 50ff). These are the ‘constitutive features’ of communication, analogous to the distinctive features of phonology. In any given variety of speech, the factors are structured further by specifying such features; registers, as bundles of specified features, may be thought of as ‘constitutive systems’.

For example, the CHANNEL factor has physical properties connected with path (vocal-auditory, gestural-visual, manual-auditory; key-—headset), capacity (bandwidth, rate of transmission, attenuation, noise-level), propagation (transient vs. storage, directionality) time mapping (simplex, i.e., sequential vs. duplex, i.e., simultaneous send/receive facilities). It also has conventional role features (public vs. private; institutionally regulated vs. open; turn-symmetrical vs. asymmetrical) among others. Each of these is an empirical variable or parameter defining a dimension of an overall contextual matrix; specification, that is, option fixing within parameters, defines the position of a given variety within the quality space of this contextual matrix. IART would be specified as ‘vocal-auditory’, ‘acoustic-electromagnetic-acoustic path’, ‘2 kHz bandwidth’, ‘variable transmission rate, attenuation, noise-level’, ‘transient, optionally directional propagation’, ‘simplex time-mapping’, ‘public and institutionally regulated’, ‘turn-symmetrical’ channels. Neighborhoods in this functional space will be discussed in §8.

The features of SPEECH, whose specifications jointly identity the genre properties of a contextually defined register (§3, §8), fall into locutionary (word, sentence, text construction) processes and metalocutionary (prosodic, especially
accent, rhythm, intonation) processes. At each level, general properties such as complexity and stereotypy may be specified, and selections of characteristic forms given. The strongly stereotypic (indeed, in its essential aspects finite) character of IART is seen at word level:

- phonological/orthographic (spelling alphabets; clarifying processes, cf. Ferguson, 1977, p. 222);
- morphological (q-signals, -x terms, &c.); at sentence level
- sets of simple frames, for example:

' my X is Y', equivalent to 'the X here is Y',

with X being 'name', 'location', 'station'.
and Y being 'Jim', 'Cork city', ...
'fox tango 101 zulu' ...

as well as at higher discourse levels (§6).

PARTICIPANTS have natural properties, enter into natural relations, play conventional (social and institutional) roles, and in a use and variation approach are the central factors in communication. Natural (though socially relevant) properties such as age, sex, physical and psychological constitution, and relations co-determined by PARTICIPANTS and CHANNEL such as proximity (for face-to-face vs. teleglossic encounters) are the easiest to identify. Communicative roles are more elusive; they may be divided into the following types:

1. PROCESS roles: PRODUCER-PERCEIVER.
2. CHANNEL roles: SENDER-RECEIVER.
3. PRIORITY roles: INITIATOR-RESPONDER.
4. TACTICAL roles: ADDRESSOR-ADDRESSEE.
5. STRATEGIC roles: FLOORHOLDER-AUDIENCE.
6. CONTROL roles: CHAIRMAN-HOUSE; PANEL-FLOOR.

At any point in IART discourse development, simultaneous and varied specifications of these role features hold. CONTROL roles generally remain unspecified, though in network traffic and in the management of 'pile-ups' when dozens of stations are calling 'rare dx' a CHAIRMAN role may be negotiated or prearranged. The FLOORHOLDER's AUDIENCE includes his interlocutor, and third-party listeners waiting for a turn or simply observing. The FLOORHOLDER may temporarily relinquish his ADDRESSOR role without yielding the floor, in order to allow dyadic back channel operation in which the former ADDRESSEE addresses the FLOORHOLDER for a restricted, locally defined purpose (§7). The INITIATOR is the 'cq'-caller, who generally retains the initiative for introducing a new Topic phase or closing the encounter. It may
be postulated that there are 'unmarked' or congruence relations between simultaneous specifications, such as 'PRODUCER+SENDER+INITIATOR+ADDRESSOR+FLOORHOLDER+CHAIRMAN' but at any given position along the 'discourse route' specifications need not be congruent. Other social roles are hardly relevant because the PARTICIPANTS in IART cut across common social groupings, though tendencies already noted such as 'technically trained white adult male' can be given, related to the status of IART as the register of a not inexpensive technological self-instructional leisure activity.

Some CHANNEL-based features were already sketched; more detail can be found elsewhere (Gibbon, 1981). the SETTING factor reduces almost entirely to the other categories: It defines a metacommunicative semantics for IART because the Topics of encounters are, in the main, CHANNEL properties, properties of the SPEECH of IART, and of the PARTICIPANT dyad immediately involved in the encounter. The metacommunicative semantics covers both general properties or relations within these categories (the 'route') and currently assigned extensional values (i.e., the current discourse status log for the actual 'discourse journey').

6. THE FUNCTIONAL CYCLE

It is not always enough in a dynamic theory of language use and variation to construct an inventory of constitutive factors, put them into mutual structures and assign them feature specifications that locate them in the overall variety space of language use. The teleological, or purpose-oriented aspects of language use that have been investigated in speech act theory and discourse analysis of various kinds need to be taken systematically into consideration and projected on to an axis of temporal development. This can be done by postulating a development process in discourse in which current indexically valid feature specifications (e.g., concerning noise, participant identity, time, frequency, stage of discourse development, Topics already treated) are continually checked and logged at turn boundaries. This indexical or contextually adaptive process will be termed the 'functional cycle'.

The smallest procedures that constitute discourse along the time axis are triplets, consisting of an adjacency pair with initiating and responding moves as the first element of a further pair whose second element is a transitional move, illustrated by this example from Sample 6:

you are an ipa station is that a qsl
qsl qsl
roger roger t'ank you very much indeed

There is an option of continuing or closing at the transition point, depending on evaluation of goal attainment. The structure of this minimal exchange process may be represented abstractly as
TWO-WAY RADIO DISCOURSE

\((\text{INITIATION, RESPONSE, TRANSITION}).\)

It is important to note that this structure does not map one-to-one on to turns and exchanges; transitions within and, in particular, between triplets may also take place inside turns (cf. Sample 7 in §7).

The perspective underlying this \((I, R, T)\) triplet is that of group interaction. But the analyst may also take the perspective of the individual PARTICIPANT, or both perspectives simultaneously if he postulates psychological realism for his model and takes the individual PARTICIPANT to have an ‘internalized’ model of the group interaction perspective. From an individual perspective, not too different from that of speech act theory, the triplet may be conceived as an individually oriented ‘plan’:

\((\text{ACTION, EXPECTATION, CHECK}).\)

At either level, the triplet could be interpreted as a quasi-cybernetic process, in which a course of action is continually checked against its interactive effects on an environment—a ‘handshaking’ process—in order to ascertain the success of a given action before proceeding to the next. No commitment will be made here to a particular perspective, \((I, R, T)\) or \((A, E, C)\), for such an interpretation because there is no evidence that would support a decision in the one direction or the other. Whatever ontological perspective is chosen, the two-level triplet structure is significant for both structural and functional reasons.

First, the TRANSITION or CHECK element provides a necessary linkage between individual units and is a prerequisite for constituting longer processes in a non-ad hoc manner from shorter processes, whether these processes are iterative or recursive (cf. §7) or essentially linear as in a smoothly progressing formulaic dialogue. If such linkages are not provided, the notion of process remains fundamentally atomistic, progressing from one atom to the next in a context-free manner.

Second, the TRANSITION element provides a motivated way of explicating concepts like ‘purpose’, ‘success/failure’, ‘closure/correction’. Goal-orientation in discourse is only explicated in an ad hoc fashion in the variety inventories of register-oriented descriptions or factor taxonomies (§4), and the cyclically used triplets suggested earlier offer more plausible explanations.

Each level of discourse strategy requires formulation in terms of contextual prerequisites and conditions to be fulfilled. At the most general level, an initial prerequisite is selection of CHANNEL specifications as ‘normal input and output conditions’ (Searle, 1969) for the encounter. If a CHECK reveals a poor CHANNEL state, various corrective strategies are available: technical (equipment selection, calibration, tuning, filtering, etc.) and conventional, involving test transmissions. These are also available for dyadic Uptake loops, which are concerned with maintaining a usable state of the CHANNEL once an encounter is in progress. The conditions for successful completion of an encounter are given by
a frame of expectations about encounter phases based on INFO exchange: call-
sign, report, name, location are the standard set, though in contest qso's only
call-sign and report are generally required. The CHECK stage for the whole
encounter is extended to a supplementary written CHANNEL, in which qsl-cards
containing the same information plus the indexical coordinates of the encounter
(time and frequency band) are exchanged. Encounters and their Topical phases
have the following general 'route' descriptions in the simplest cases:

ENCOUNTER
A: specify genre and context matrix
   if initiator, then at each phase INITIATE, RESPOND
   otherwise RESPOND, INITIATE
E: complete information exchange
C: if successful, then written qsl, next ENCOUNTER
   otherwise next ENCOUNTER

INITIATE A PHASE
A: give relevant information in qso
E: oral qsl by interlocutor in qso
C: if successful, then oral qsl by initiator, exit
   otherwise loop back to A

RESPOND IN PHASE
A: log relevant information in qso
E: oral qsl by interlocutor in qso
C: if successful, then exit
   otherwise loop back to A

Within any local loop, further Uptake-oriented embedding may occur. As the
descriptions of these triplets imply, encounter development is not a simple struc-
ture limited to hierarchical branching and linear strata. This becomes more
apparent in detailed network representations of discourse structure, as in Figure
4, where the low-level subnetworks require access to current contextual dis-
course status information, which must be continually logged (on signal report,
name, location, station, or more open-ended 'leaky point' information) and
checked against position in stereotypic discourse templates. Further, the order of
application of contribution strategies within exchanges is dependent on PAR-
TICIPANT feature status as initiator or responder. Even this is not enough,
however, because the Framing functions of uptake signals ('roger', 'ok', 'qsl' as
CONFIRM or CONFIRM?) may recur in ad hoc uptake loops on any item of
information regardless of progression within the discourse template, and in addition
to the loop options in process types A2, A3.

To clarify the categories used in describing the functional cycle, a metaphor
has been used: that of the 'discourse map'. In any given interaction, 'routes' are
chosen on the basis of a discourse map (or network of discourse maps); once the
'discourse journey' has been commenced, the current position must be con-
stantly checked, logged, and when necessary modified. This is the functional
cycle.
TWO-WAY RADIO DISCOURSE

CONTRIBUTION:

[Diagram of a two-way radio discourse network with nodes labeled Co1, Co2, Co3, Co4, Co5, Co6, and Co7.]

BREAK

CONFIRM

INFO

CONFIRM?

BREACK

CONFIRM

IDENT

[more?]

IDENT

CLOSE

[initial?]

IDENTIFIER:

[Diagram of identifier network with nodes labeled id1, id2, id3, id4, and id5.]

CALL [name?]

LINK [type?]

CALL [role?]

ROLE [link?]

CALL [init. contr.?]

[init. exch.?]

CALL [init. contr.]

[init. exch.]

CALL-SIGN

[addressee?]

CALL-SIGN

SPECFIER

[init. contr.]

[init. exch.]

[addressor?]

[addressee?]

FIG. 4. Three subnetworks for IART speech processes. Conventions: initial states—broken underlining; final states—unbroken underlining; conditions on transitions—"...?"; storage during transition—"...!"; context related actions—lower case, in square brackets.

In some kinds of discourse such as nonce communication between strangers (especially if they are alien to each other in social, cultural, or communicative conventions) or, indeed, any learning-oriented variety or speech, whether of child or adult, the map is constructed during discourse itself, involving higher level processing activity. This is no doubt true to some extent of all discourse, including highly stereotypic registers like IART, though in general the 'map' is largely given. A study of learning strategies in an Artificial Intelligence frame-
work has been made by Kayser (1980), dealing with a close neighbor of IART in variety space, short-wave morse traffic.

Whatever kinds of ‘processing properties’ are ascribed to PARTICIPANTS in IART, they will need to be able to keep a continuous record of general register parameters, the ‘route’, and a shorter term log of current values assigned to these parameters, the ‘journey’, such as pointers to position in discourse, to speaker status as INITIATOR/RESPONDER relative to Uptake loop embeddings, to Topics processed, to Uptake status and fluency of interlocutors (native or non-native speaker of English, French, &c.). The relevant parameters for this purpose are the constitutive factors and features introduced in §4 and §5.

7. AN UPTAKE-SECURING PROBLEM

At all levels of word, sentence, and discourse structure, normal fluency requirements on speech are present. However, IART is used in a kind of ‘contact situation’ with major influence by native speakers of English (and analogous situations may be observed with other widespread ‘trade’ languages), but including non-native speakers. This resembles the classical pidgin situation, where speakers of two different languages use a third economically, politically, or otherwise more powerfully backed language for a restricted purpose. A dialogue of this category is reproduced in extenso in the following sample. Although the assignment of pidgins to the ‘variety space’ postulated here is in itself a fascinating question and closely related to the problems discussed here, it would require a different framework to do it justice. The problem discussed here is one of Uptake caused by ‘user noise’, here a kind of ‘tip-of-the-tongue’ malfunction deriving from lack of fluency of English, and not the kind of lexico-syntactic question typically associated with discussions of pidgins.

Sample 7

P1: we have a question for you because we like * have * *: q5os * with * many italeen stations because that is a very (...) language your language = and * please * spell us * how (...) I don’t know is correct on English * (pause) attention /ei bi si di ei ev dgi/ attention alpha bravo * sierra how is that in Italian = okay?

P2: I’m sorry I it’s impossible to understand your /kefn/ repeat your /kefn/ in the French language its I don’t know (...) English language but * its * I don’t understand what you say but repeat please * Sasco

P1: attention * how is with spellin * how your spelling * *: par exprimer yankee united * five florida (ramerzo?) dat is on your language is yankee université numero cinque * francia romania (...) * c’est pour exprimer mais tu (...) tout le monde done seul (...) tell me please * how is all all abc *: I don’t know how it’s in English (...) how is spelling your all abcd and * other * you can understand now = break

P2: ah well * Sasco I think * you must know = I think you would know where * many Italian * people * speaking in the radio = but I’m no sure = if you want to know
where you must * look * * the Italian people speaking if this is the question Sasco over

P1: no no okay the how your spelling * how you spell *: just speaking all a alpha b bravo c sierra (...) * excuse me = c charlie * how is that in Italian tell me do you understand now

P2: yes I write three letters abs abs alpha bravo sugar but I dunno = I do not know * what you say with the three letter a b s what's mean *P what's mean Sasco (giggle) excuse me but I do (nasalized o) understand

P1: no only abs all letters no only abs * ab * g d a * e * g * and other d you understand now = on * your language on your language okay

P2: but repeat slowly repeat slowly abs and other words * repeat spell please slowly over

P1: attention all letters all letters = a = b = c = d = e = f = g = i * and other d you understand now that is an English with spelling alpha bravo sierra and other * do can tell me how is that with spelling on your language on Italian over

P2: (laugh of relief) oh roger roger alphabet alphabet (cough) all letter in alphabet over * is that correct Sasco

P1: * yes yes * do you can tell me italy B echo whisky manilla yu5frz listening (...)

P2: yes yes I tell you = tell * please * written * r-write thi- * Sasco, Sasco, please * my wife * told me /ei/ important message important message * received from telephone can you = wait * can you wait *: one minute Sasco * and after * I told you all letter I can * stay wid you * all time okay Sasco

P1: okay I wait for you

P2: just moment qrx * two minutes

P1: okay

The following is an attempt to provide a detailed reconstruction of the functional status of each contribution, using the (**I R, T** model of §6; each pass through the elements of a triplet is serially indexed from 1 to 10. Embedding is visually marked by indenting. Note that relatively simple form-interpretation relations in IART ensure that this functional structure is, with few exceptions, formally marked. Subsentential Uptake strategies are not considered.

P1: I1 Question about spelling

P2: R1 Negative Uptake,
  Requests iteration in French

P1: T1 Not answered, iterate.

P2: R2 Uncertain uptake, embed:
  I3 Uptake hypothesis (where are Italians found)

P1: R3 Hypothesis rejected
  T3 Hypothesis cycle completed, exit.

P2: T2 Main question still unanswered, iterate.

P1: I4 Main question again, (wrong) heterophonic spelling

P2: R4 Spelling copied, meaning not understood, embed:
  I5 Uptake request (meaning of letters 'abs')
P1: R5 Reject interpretation as word ('all letters')
P2: T5 Meaning of 'abs' still not understood, iterate.
    I6 Request to repeat 'abs and other words' slowly
P1: R6 Extend to 'all letters', slow repeat (a ... i)
P2: T6 (laugh of relief), 'abs' explained, embed:
    I7 Request to confirm 'alphabet' interpretation
    R7 Interpretation confirmed
    T7 Request complied with, exit.
    Uptake loop (meaning of 'abs') over, exit.
T4 Main question still unanswered, iterate.
I8 Elliptical repetition 'do you can tell me'
R8 Start of answer, but...
    INTERRUPTION
    I9 Request to wait while telephone is dealt with
P1: R9 Request accepted
P2: T9 Uncertain? Iteration for emphasis/politeness?
P1: I10 Repeat request to wait
P2: R10 Request accepted (P1 then presumably waits...)
(end of transcript)
( T10 End of wait loop? Not recorded.)
( T8 Italian alphabet given? Not recorded.)

The dual role of CONFIRM as a Framing category with similar function to Uptake loops and recursions makes it difficult at some points to decide whether to introduce a new level of embedding (cf. the 'okay Sasco' in the final INTERRUPTION sequence). Priority was given to the Framing interpretation, which yields a 'flatter' structure.

The PARTICIPANT role patterning involved here is quite intricate. Uptake loop embedding of two distinct types, initiated by hypothesis or by request (cf. Figure 2, §3), triggers local changes in role specifications; the category of INITIATOR is seen to be a local role, that is, relative to the particular level of embedding that holds at any given moment because P2 clearly takes over this role when he misunderstands the meaning of 'abs' as an abbreviated word.

This approach to discourse processes in terms of the dually structured triadic procedures introduced in §6 that define a dynamic 'functional cycle' suggests a number of interesting questions about constraints on processing in Uptake loops. One would be whether different depths of embedding should be postulated for P1 and P2, since there is no reason why both should be totally congruent. If this distinction is made, the repetitive character of P1's contributions suggests that P1 is processing at a shallow, iterative level, while P2 sometimes processes the same cues with an additional level of embedding. It may be possible to find other cues for noncongruent processing by PARTICIPANTS.

8. NEIGHBORHOODS IN VARIETY SPACE
If constitutive systems were explicitly given for different varieties of SPEECH, their distribution through the formal and functional space of language use could
be established, and roughly classified by cover terms, for kinds of 'neighborhood'. Three such cover terms will be defined, 'register', 'genre', and 'style'. The second definition differs slightly from received uses, while the first and last are relatively conventional.

Where varieties of SPEECH in use differ in CONTEXT specifications, they may be thought of as different registers. The conventionalized SPEECH FORM patterns within a register will be called a 'genre'; they constitute one kind of 'significant speech style' in the sense of Hymes (1972), in being available for use outside the 'defining CONTEXT' of IART for various special purposes, such as 'phatic' group identification and solidarity. In these 'displaced uses' (cf. Ferguson, 1977, p. 229ff.), such features may be termed 'jargon'. Where varieties differ in SPEECH FORM specifications without CONTEXT specification differences, they differ in 'style'; styles are conventional options rather than context adaptations. Each cover term, 'register', 'genre', and 'style' defines a functional or formal neighborhood in variety space; if the concept of 'displaced use' is admitted, perhaps the map metaphor may be extended: 'neighborhood' types on geographical maps may be physical, political, &c.; they may coincide, as formal and functional features may coincide, or they may be at odds with each other in functionally significant ways (though 'jargon displacement' does not usually raise passions quite as strongly as political/territorial mismatching). In §9 a further neighborhood problem related to the pidgin properties mentioned in §7 will be taken up: Do variety neighborhoods hold across languages?

Amateur radio talk varies internally and externally: It has subregisters, subgenres, and substyles, and it differs from immediately neighboring registers with their own genre characteristics and internal styles. Its main subregisters are, like IART as a whole, mainly CHANNEL-defined: telephony, morse telegraphy ('cw'), and radio teletype ('rtty'). Variation within these subregisters tends to be essentially stylistic. Use of telegraphic abbreviations in telephony (e.g., the q-signals, 'qso', 'qsl', &c.) is in part a 'displaced use' of genre features of one subregister within a neighboring subregister, particularly in the less terse styles of IART. Only telephony will be considered further here.

Within the range of IART telephony, several styles can be identified. The extreme ends of the stylistic scale lie with 'contest protocol' at the terse end and 'ragchewing', with a maximum of 'leaky points' for fulfilling phatic and informative functions at the other. Ragchewing style is not illustrated in the data given here. The long uptake episode of Sample 7 is an unsuccessful attempt to use this style.

The terse contest style is perhaps the most restricted form of IART. Because speed is at a premium in most contests, use of telegraphic genre features is less 'jargon-like' than in other styles; contacts, too, are generally extremely brief, Sample 4 being not untypical in this respect.

In other conventional types of IART interaction such as 'qst' transmissions (news bulletins, &c.), less terse and topically more 'leaky' styles are involved, with Topics like propagation conditions, amateur radio satellite data, new 'dx-
peditions’ (i.e., trips to remote areas of the world to ‘activate’ rare call-signs for qsl-card collectors), and little Framing is required beyond regular station identification in compliance with international regulations. These Topics represent SETTING extensions, and therefore they may justify postulating a register extension along this dimension when they occur. Fluent speakers naturally tend towards chattiness, although the pidgin and ‘foreigner talk’ aspects of IART involve less stylistic variation of the chat type; inexperienced non-native speaker operators tend towards the terse style, while inexperienced native speaker operators often go to the other extreme. A disadvantage of chatty styles when working under variable propagation and interference conditions is that uptake is difficult to secure if turn-taking is slower than changes in conditions because CONTEXT status monitoring takes place serially, at turn boundaries, (unlike the mixed serial and parallel processing of face-to-face communication) owing to the rigid one-turn-at-a-time simplex CHANNEL. Many a qso partner has been lost through prolixity. Where stylistic features appear to be CONTEXT-adaptive, they are perhaps best seen as subregister markers: Indeed, ‘clear frequencies’, and wavebands with good local propagation (80 m, 40 m, 10 m, 2 m) and long-term stability, are generally preferred for the ragchewing styles, yielding subregisters that are specified in part by reference to the waveband dimension of the CHANNEL factor.

A minor ‘displaced use’ of genre features in IART was noted earlier. More extreme uses occur ‘off the air’, that is, completely outside the defining CONTEXT for the register, at club meetings and the like; for instance, the metaphor ‘eyeball qso’ is the jargon-derived ‘technical term’ in ham parlance for what students of interaction term ‘face-to-face communication’. In ‘displaced uses’ of SPEECH, hams are like other specialists who use their technical or other academic registers in genre-flavored paraphrase or metaphor outside the defining CONTEXT; the insular character of academic conferences is particularly conducive to generating ad hoc jargons of this kind.

To give a systematic treatment of neighboring areas of variety space that are further removed from IART would require more extensive study. Research is in progress in various quarters on technically assisted communication, from the similar register, genre, style, and jargon of CB, through commercial radiotelephony and telegraphy to telephone conversations and radio and television broadcasting. A close, though at first glance unlikely neighbor of IART is commercial or official correspondence, with relatively stereotyped Framing; other forms of writing are also relatively close neighbors, particularly with regard to the CHANNEL feature of simplex time-mapping.

In CB, legal constraints on interactive goals are quite different from those on amateur radio, though similarities of CHANNEL constraint have similar consequences for uptake strategies. Metacommunicative aspects take second place to topical and phatic ‘leaky points’, which tend to be exceptions rather than the rule in IART, though IART communication between native speakers tends in this direction. CB is almost exclusively native-speaker communication.
Institutional and CHANNEL constraints on broadcast radio are different. Turn-taking is more complex, with unidirectional transmission superimposed on whatever group structures may be established in the studio. A major goal in mass broadcasting is to overcome the strong constraints of a unidirectional simplex CHANNEL specification, as in listener-participation programs (cf. Selting, 1981)—or, in entertainment programs, at least to distract from it.

Written correspondence also resembles IART in imposing technical constraints on turn-taking: Here, too, there can be no simultaneous monitoring of CONTEXT status specifications because of the rigid simplex CHANNEL structure. An analogy to the accurate synchronization of turn-length and CONTEXT status changes that was mentioned above might perhaps be seen in the rhythm of correspondence; in some contexts, no doubt, many a correspondence partner has been lost because of lack of synchronisation in these respects.

9. CONCLUSION: REGISTER, GENRE, AND CROSS-LANGUAGE VARIATION

'Use is variation' is one of the assumptions underlying this paper. Although IART is a fairly 'clear case' in respect of the neighborhood types discussed in §8, even here the borders between different analytic categories are not clear-cut. When English IART is compared with its analogues in French and other languages, strong similarities appear, from detail in process stereotypes (the q-signals, Framing idioms like 'mike to you', 'à vous le micro') to Uptake strategies. Unlike 'relexification' processes in pidgin history, these interrelations involve lexical (and discourse strategy) constants, and a 'restructuring' of syntax and phonology. Does this mean, then, that code-switching for Uptake or ADDRESSEE-adaptation purposes (cf. Sample 7, §7) implies that the very structure of a language may be only one of a variety of context-adaptive parameters beside the lexicon and discourse conventions? This appears to be the case, at least from the limited perspective of IART (though this conclusion breaks down when the 'leaky points' are considered).

But it seems counter-intuitive to speak of 'cross-language registers', if registers are conceived as use-oriented varieties of a language (cf. Gregory's 'diatopic' varieties, 1967, p. 194). The abstraction of 'genre' (§8) as the formal features of a register is useful in this situation: There is nothing peculiar about the idea of a cross-linguistic genre, whether it is a literary sonnet or formulaic IART discourse (cf. Ferguson, 1976). It could be suggested, then, that 'neighborhood terms' like 'register' and 'genre' allow differences of perspective in variety space to be formulated: From the perspective of a given language, IART is a register; its genre features may be 'displaced' to other uses of the same language, or, indeed, they may recur selectively in other languages. This selectiveness suggests that the neighborhood terms are best regarded as cover terms for bundles of specifications at a more fundamental, more abstract level of analysis using constitutive factors, features, and systems. Whether a bundle type (corre-
sponding to a kind of neighborhood in variety space) is then called ‘register’, ‘genre’, or anything else is reduced to a matter of convenient definition (though there are, no doubt, specification bundles that are more ‘natural’ in some way than others). Perhaps this is sufficient explanation for Ferguson’s thesis that “the structural and situational boundaries of a register are often blurred, and the degree of its implementation may vary”; certainly IART is sufficient evidence for the suggestion that “at times there is a sufficiently delimited set of correlated characteristics of language structure and situations of use to recognize particular registers” (Ferguson, 1983).

But analysis has shown that it is not enough to postulate neighborhoods in a variety space or correlations between formal and functional dimensions of variety space. At least two further conditions must be fulfilled. First, this space should be more highly structured in terms of factors and features than category inventories of mixed ontological types (as in Hymes, 1972: message form; message content; physical setting; psychological scene; speaker/sender; addressee; audience; purposes as outcomes; purposes as goals; key; channels as media/modes of use; forms of speech as language/dialect, code, variety/register; norms of interaction). Second, the dynamic conditions on the use of language in adaptation to context must be considered, whether code-switching, uptake processing, or topic logging is concerned.

Fulfillment of these conditions justifies the claim that ‘language use is language variation’, each in its own fashion: First, any assignment of specific features to the general factors for use in speech simultaneously defines selection of a functional variety; second, continuous checking and logging of particular indexical values obtained at any given time defines a dynamic kind of variation as adaptation of SPEECH to CONTEXT at speaking time.

REFERENCES