Two main viewpoints have been consistently implied in linguistic research on creativity. The externalist sees creativity as outside the normal language, and the internalist views creativity as a basic process of language use. In this paper, creativity is regarded as the adaptation of the potential of systems to the demands of a particular act of communication. Any modification must be motivated; it is also restricted by the tolerance level of language users. Creativity is not a matter of texts or a special focus on the message, but is a shared activity of speaker and hearer. The modification that the speaker performs on systems or on system correlation, as well as his motivation, must be recovered by the hearer. The basic mechanisms of creativity are means of recombination; new elements added to the repertory must appear in motivating combinations within or among systems. This definition of creativity is more general and flexible than are the older theories. Creativity is the process whereby we become aware of the present and the possible conditions for the organization of cognition, and whereby we enable others to reenact that awareness. In whatever modifications are performed on prevailing systems, language users gain new insights into both the standards of those systems and their potential for change. (DF)
As its opening speaker, I would like to cite this conference as a landmark of change in the interests and priorities of linguistics. If language use were really only a conditioned response to a stimulus as suggested by Leonard Bloomfield (1933), creativity could hardly be a linguistic issue. In the no less traditional model with a sender, a message, and a recipient, creative language use would have fallen under the poorly defined concept of "encoding" (cf. criticism in Höffmann 1976: ch. 1). Roman Jakobson's (1960: 356) famous definition of the "poetic function of language" as the "focus on the message for its own sake" is of course based on the tripartite sender/message/recipient model. Such a definition has led to acute insights into the formal arrangement of some types of creative texts, but has also blocked research into the creative processes which are entailed in producing and receiving such texts.

I submit that theories of literature and poetry, as well as of jokes and puns (e.g. proposed by Scherzer 1977), presuppose a more general theory of creativity. Although regrettably little linguistic research has been devoted to this issue, we can say that two main viewpoints have been consistently implied. According to the first, creativity is considered something outside the normal language, a violation of norms, and hence outside linguistics itself, being relegated either to the discipline of stylistics or to the unmapped regions of "parole" or "performance." One might call this the externalist viewpoint. According to the internalist viewpoint, on the other hand, creativity is the basic process of language use, and hence a central concern of linguistics. I shall sketch some serious problems raised by both the externalist and the internalist viewpoints, and then propose a different, more general and flexible definition of creativity.

The externalist viewpoint reflects the long-standing preoccupation of linguistics with describing language as limited systems of elements, such as minimal units of sound, form, meaning, etc., and as procedures for combining such elements. Language which seems
The concept of deviation has provided enriching insights into some aspects of creative texts, but has been much less helpful regarding other aspects. It is by no means evident that creativity must entail obvious deviations of the kind usually cited, such as in the poetry of e.e. cummings singled out by so many linguists (Thorne 1968, Hill 1967, Hendricks 1969, Butters 1969, Cartensen 1970, Enkvist 1971, Koch 1972 etc.). These deviations are sought primarily in the areas of grammar and syntax, being of course the best developed areas of linguistic study. However, much creative writing actually lacks these obvious deviations (cf. Spillner 1974:35f.). Moreover, the deviation concept gives us no obvious means to differentiate between such a sequence as Milton's 'Thee, chantress, oft the woods among/ I woo to hear thy even-song' and ungrammatical nonsense such as 'Mat the sat cat the on'.

This latter problem is attenuated in discussions of poetry on the basis of transformational grammar. As Chomsky (1965) himself argues, utterances outside the grammar can be set in analogy to well-formed counterparts, so that statements about the number and extent of violated rules become possible. The violation of rules is not usually arbitrary, but itself leads toward new rules or regularities, according to Manfred Bierwisch (1965). However, the status of these rules is very disputable. It is clearly uneconomical to expand any grammar by addition of special rules with one or a few applications. Moreover, these rules are much more bound by context than standard rules, suggesting that they might be an aspect of performance (Fowler 1969).

Transformational grammar also lent support to the internalist viewpoint by defining competence as the ability of language users to produce and comprehend an infinite set of sentences of their language. Since many sentences are unique to their users, the application of a grammar appears as "rule-governed creativity" (Rabitch 1977:337). Thus, the older notion of language as a stimulus and response mechanism is revealed as
fully inadequate (cf., Chomsky 1959; Härmann 1967, ch. 11). While the utterances themselves constitute an infinite set, the rules or procedures for producing and comprehending them must be finite. Not surprisingly, the search for a finite basis of infinite language manifestations has become the main incentive of linguistic research (Koch 1973:ixvi). However, the question of how strongly that finite base controls the production and comprehension of infinitely many utterances remains far from solved, and, in my view, has received far too little attention. This question can only be answered with a truly usable definition of creativity.

The internalist viewpoint invokes once again the problem of differentiating between utterances, although in the reverse direction from the problem as raised by the externalist viewpoint. I suggested above that the externalist view gives no standards to distinguish non-grammatical poetry from nonsense; by the same token, the internalist viewpoint provides no means to distinguish between the eternal linguists' banality of 'The cat sat on the mat' and a well-formed poetic utterance such as Tennyson's 'The splendour falls on castle walls'. Both are creative in the sense of being generated by rule application, and both show rime.

Another serious problem is that neither the externalist nor the internalist viewpoint gives criteria for judging the degrees of creativity within a given type of text. If we wish to measure creative quality as being the extent of non-standard or non-grammatical usage, we not only eliminate such texts as Tennyson's, we also admit such undesirable samples as William McGonagall's lines: 'Rev. George Gilfillan of Dundee, I must conclude my muse/And to write in praise of thee my pen does not refuse' (see Werth 1976 for an application of Jakobson's method to this poem).

In view of these and other difficulties, I would propose discarding both the externalist and the internalist viewpoints and adopting another which can be termed motivated modification of systems. As Wolfgang Dressler and I have argued in our survey of text linguistics (Beaugrande/Dressler 1979), language should be viewed not simply as a system of signs or minimal units, but as an intersystem, that is: an
integrated set of participating systems. Each system is definable by three factors: 1) the elements it contains; 2) the organization principles applicable to those elements; and 3) the correlation of the system to others within the intersystem. We note that, by this definition, a text is itself a system; but since any text represents a selection and combination of elements from among the participating systems of language, we prefer to call a text a transsystem. The text is the only naturally occurring manifestation of language, either in speech or writing. In contrast to purely systemic entities such as phonemes, morphemes or abstract sentences (often called "sentoids"), texts imply the potential for transcending language systems, that is: modifying either the repertory of elements, the organizational principles, or the correlation of systems.

In the past, linguistics has preferred to dwell upon the normal organization of the simplest systems, especially sound, and rightly so: we can say little about an intersystem or its modification until we have a description of the internal properties of participating systems. For this reason, texts as transsystems have only entered the scope of linguistics within the last decade. Another emerging concern is the possibility of representing the model of reality accepted in a group or society as an intersystem with organized systems of entities and processes, an intersystem correlated with that of language by complex principles.

We share the transformationalist conviction that the modification of systems (which they call "rule violation") is seldom or never random and arbitrary. Yet the key factor is not the establishment of new rules (as implied by Bierwisch 1965), but rather the adaptation of the potential of systems to the demands of a particular communicative situation. A random modification without such motivation would be hard to imagine in actual communication, and would produce a non-text such as our artificial sample of "Mat the sat cat the on". Modification is further restricted by the tolerance level of language users, varying among individuals, social groups, text types, and situation types. What is allowed in a poem or a church
sermon for those interested in literature or religion is not necessarily tolerated in friendly conversation among factory workers (cf. Kintner 1974: 39). Tolerance is derived from the willingness to revise expectation and predictions (Beaugrande 1978b). Part of the success of a speech act in the sense of Searle (1969) lies in respecting the appropriate degree of tolerance among participants.

It follows from this proposal that creativity cannot be merely an aspect of texts, nor special focus on the message as suggested by Jakobson (1960), but rather a shared activity of speaker/writer and hearer/reader. The modification performed by the speaker/writer upon systems or system correlation, as well as the motivation for that modification, must be recovered or reconstructed by the hearer/reader, if communicative interaction is to be successful. Such recovery or reconstruction need not be performed explicitly or consciously, nor must it agree with the speaker/writer's own estimation of the original act of modification. In fact, it is not unusual in creative language use to allow several compatible or even competing possibilities side by side. Yet if no recovery of the modification and its motivation is possible, the text will seem pointless, or, in extreme instances, meaningless.

It seems unlikely that explicit rules can be the determining mechanism in the modification of systems: such rules would themselves constitute a standard and thus destroy the aspect of individual interaction. Instead, I would advocate postulating flexible strategies, whose manifestations, from the standpoint of grammar and lexicon, may be very diversified. These strategies are summoned when required in a given context, and constitute not only "poetic competence" as envisioned by Bierwisch (1965) and Ilse (1970), but more generally, "creative competence." In another work, I have described the activation of some such strategies in the processing of a poetic text by Rainer Maria Rilke as a phase of translation (Beaugrande 1978a).

A single language system contains a repertory of elements which is sometimes small or even closed, as in the phoneme system of a language, and sometimes large and potentially open, as in the lexical system. Similarly, the organizational principles
which control the combinations of elements may be rigid in some areas, e.g., certain sound clusters or syntactic sequences being clearly disallowed in a given language; and flexible in other areas, allowing for many varied combinations, some of which occur and some of which do not, e.g., word formation (cf. Lees 1960:121). Creativity which modifies closed sets of elements or rigid areas of organization will appear more radical and often less tolerable than that which modifies open sets or flexibly controlled areas of organization. This gradation in creativity with respect to language potential is largely free of context.

On the other hand, the motivation of a specific creative act is clearly bound to the context of occurrence. If a particular modification of language systems is performed repeatedly, it loses its effect for two reasons: 1) the hearer/reader may consider the utterance standardized, and hence not a modification at all; 2) the use of the modification is not motivated by the specific context. For example, a stock metaphor becomes a standing unit of the lexical repertory. Similarly, a well-known joke is not amusing, because the hearer/reader's act of re-creating at that moment is superfluous.

The basic mechanisms of creativity can all be subsumed under the concept of recombination (cf. Beaugrande 1978c). New elements added to the repertory must appear in motivating combinations, either within the system or among systems. In the same manner, modification of the organization of systems or their correlations with other systems are manifested in new (or at least non-standardized) combinations. Besides the addition of new elements, we may encounter the deletion, transformation, or replacement of elements in combinations (van Dijk 1972: 212). Most, if not all, rhetorical devices can be classified according to these types of recombination (Beaugrande 1978c).

The foregoing remarks can be illustrated with the following lines from Lewis Carroll's (1976: 153) famous 'Jabberwocky':
"Twas brillig, and the slithy toves
Did gyre and gimble in the wabe:
All mimsy were the borogoves,
And the mome raths outgrabe.

These lines represent firstly the reorganization of discourse typical of English poetry, in that each line has a certain rhythm and ends in a rhyme. These poetic modifications of standard discourse are themselves standardized, and so they do not constitute a creative aspect in this particular instance. Instead, creativity is manifested in the addition of new lexical items to the open set of English vocabulary. Despite appearances, this creation is by no means random, but represents a motivated recombination of the potential of English language systems. The author himself (1976:215-17) shows that some new additions are recombinations of the formal properties of extant English lexical items: 'slithy' is derived from 'lithe' and 'slimy', and 'mimsy' from 'miserable and slimy'; the form of 'brillig' is partly attributed to 'broiling', that of 'gyre' to 'gyroscope' and that of 'gimble' to 'gimlet'. The form of 'mome' as due to 'from home' shows the placement of the final part of one word at the beginning, as opposed to 'frome' which would be the application of the same principle of 'slithy' and 'mimsy', where position in the respective words is maintained; but 'mome' is thus able to alliterate with 'mimsy'.

The new lexical items are also shown to refer to entities that are themselves recombinations of known entities in the standard organization of reality. Thus 'toves' combine features of badgers, lizards, and corkscrews, and 'borogoves' of birds and mops; the act 'outgrabe' is a recombination of bellowing, whistling, and sneezing. These additions are made to the large, flexibly delimited sets of animals and animal activities. Their seemingly arbitrary linguistic form is specifically motivated by the potential of various systems: 1) their phonemic forms are all allowable in the normal repertory and combinational procedures; 2) alliteration ('gyre/gimble', 'mimsy/mome') and rhyme ('toves/borogoves', 'wabe/outgrabe') are attained; and 3) the morphemic system is manifested in such things as the adjectival '-y' in
'slithy' or 'mimsy', the plural 'e' in 'toes, borogoves, raths' and even the vowel shift of 'outgrabe', explained as the past of 'outgrape'. In addition to all of these systemic constraints, the new creations also unite to form a unified context about animal activities in one place. The ease of visualising the scene has been demonstrated in the incomparable drawing by John Tenniel (Carroll 1976:216).

I have deliberately selected an extreme example of what I hold to be very widespread creative processes in text production. The extent to which poetry is controlled by the mutual influence of systems has been repeatedly demonstrated by Jakobson (a list of sources being given in Jakobson 1968:602-03, note 3), and needs no further comment here. Instead, I shall close with a brief look at narrative creativity manifested in the novels of Lewis Carroll (all in Carroll 1976).

In Alice in Wonderland, we can find that the seemingly random narrative sequence is in fact controlled by three main principles. The first two are plainly recombinational: 1) changes in size of the protagonist, whose perspective of the text world shifts accordingly, and 2) the endowment of non-human entities with a selection of human features. The third principle provides continuity within the framework of the English child's textual experience, being the enactment of events cited in nursery rhymes. The readers' task is highly dynamic, being to sort the manifestations in the text world according to these various principles. Neither the size changes nor the mixture of human and non-human features is stable; size may change within a situation (e.g. the trial scene) and affect the latter, while the playing cards and animals which furnish most of the personnel can and do return to their non-human status intermittently.

In Through the Looking Glass, the enactment of nursery-rhyme events is combined with 1) the principles of a chess game, and 2) the reversal in time or space suggested by the mirror-image effect. Again, no principle is maintained consistently to the exclusion of others, again requiring a re-creative sorting activity from the reader, whose perspective is in part reflected in Alice's own. For example, reversal occurs only in isolated episodes, while the narrative action generally moves forwards.
The reader of these novels is thus confronted by a host of modifications performed on the intersystems of language on the one hand and organized social reality on the other. These modifications are not random, as I have suggested, but result firstly from the application of general narrative principles in diversified combinations, and secondly from the opposition to social reality as such. Conventions of politeness and rational procedures of conduct are constantly disregarded by the personnel of the novels; clumsiness and incompetence divert planned events into unexpected channels. Interaction by dialogue is often transformed from an interchange of relevant information about a situation into sequences of puns, that is: coincidences in the system of sounds supplant the normal principles of textual coherence.

We can conclude that the essence of Lewis Carroll's creativity and its profound effects on readers derive from extensive, partially competing modifications of the systems according to which cognition of reality is organized and correlated with potential representations in language. The basic motivation stems from the author's intention to depict and re-enact the orientation of the child who perceives the normal organization of social reality as a similarly curious combination of principles. It is no coincidence that the bizarre personnel of the novels constantly imitate the mode of treatment accorded to children by adults in Carroll's time. Consequently, the modifications which the author has performed are clearly not an end in themselves --- e.g. focus on a message for its own sake --- but rather a means of attaining new perspectives upon the standard organization of the systems involved.

With this we have arrived at a definition of creativity which is both more general and more flexible than the older ones. Whatever modifications are performed upon prevailing systems, be they composed of phonemes, morphemes, narrative sequences, or real-world organization, language users gain new insights into both the standards of those systems and their potential for change. In short, creativity is the process whereby we become aware of the present and the possible conditions for the organization of cognition, and whereby we enable others to re-enact that awareness.
Notes


2. The rise of text linguistics may be seen to begin about 1968, marked by the appearance of such fundamental works as Harweg 1968, Postal 1968, and Palek 1968. The actual inception dates from about 1964 (see Beaugrande/Dressler 1979, foreword).

3. The source words 'gyroscope' and 'gimlet' do not alliterate, but the author himself insists that both /g/’s are "hard" [g] (Carroll 1976: 138).

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