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Topics in the theory of narrative algorithms

The acquisition of language by children or adults is of interest to both psycholinguists and historical linguists. Psycholinguists are particularly fascinated with aspects of developmental transition between the stage of sentence dictionaries and the subsequent stage, where children begin to distinguish between word dictionary and combinatorial rules (McNeil 1970:115). Some historical linguists, on the other hand, would like to isolate lexical alternations from other types of changes and construct an algorithm that would allow the effect of lexical alternations (new formations such as metaphors, sporadic analogies, "new words", fashion words, etc.) to occur at any point between a grammar G_1 and an immediately following grammar G_2 (Isenberg 1965:155f.; cf. Martinet's concept of openendedness for lexical series).

Considerations such as these are directly relevant to a formal linguistic theory of "advertising" (on TV or elsewhere). Commercials, be they child- or adult-oriented, must aim at adding something somewhere in the mind of the consumer, if they are to be efficient. But how is this to be done?

Let us first consider the writing of commercials. We must distinguish for the "ideal writer" three levels of linguistic competence and performance: narrative, phrastic, and metaphrastic (Tusseau & Wittmann 1973, Wittmann 1974). The writer's total narrative competence must include, as a subset, his ability to construct the simplest optimal algorithm generating the set of commercials, of which the commercials heard from predecessors are a representative sample.

Let us call "narreme" (following Dorfman 1969) any minimal narratively functioning unit having the superficial structure

$$(S_0, \dots, S_n)$$

where S stands for "sentence" linked to other sentences in a relationship which cannot be ungrammatical as to logical form; and let us call "narrative" any string of narremes with a preceding narreme always being the effective cause of the following one. The underlying structure of the narreme may be defined as a set of narrative concepts, each concept being a structural unit with its own specific function to perform. Narrative concepts are of two kinds: marginal (M) and central (C).

$$(M_0 \wedge \dots \wedge M_n) + C$$

is the string formed by concatenating the symbols representing the narrative abstraction of segments in reality (real events, objects, gags, etc. used to

support and fill out the narreme) and adding the "core predicate" representing the narrative abstraction fundamental to the narreme. The test of whether or not a narrative concept is fundamental must be based strictly on the criterion of underlying function. The core predicate is represented in surface structure by what Saussure (in his study of anagrams and their combinatorial rules, cf. Starobinski 1964) called "mot-thème" (theme-formative), but which actually might turn out to be a set of synonyms.

A commercial may now be defined as an incomplete narrative consisting of a single narreme, the theme-formative of which merges into a single superficial symbol N (representing the real object the consumer ought to buy).

How may we now characterize some of the aspects underlying the linguistic competence of the consumer? Language intends to be a means of communication, and a particular narrative intends to have some sort of impact on the ideal listener. A commercial is nothing more than a special type of narrative stratagem intended to imprint a particular theme-formative upon the "memory" of the ideal speaker-listener consumer.

$$| E_1 | \rightarrow | E_1 | + N (< + \infty)$$

defines the concept "ability of lexical fields to change in quantity" (in other words, the concept "openendedness of lexical series" generally admitted in linguistics following Martinet). $| E_1 |$ represents the number of all lexical units of a particular field in G_1 ; and N a number of new lexical items which may enter at any point between G_1 and G_2 but not all of which need be preserved in G_2 .

Thus, the ideal writer of commercials operates on the following assumptions with regard to the ideal consumer:

- (a) a particular new target item (representing the product in reality) may be added to the existing items in a particular lexical field;
- (b) the new item may compete with existing ones;
- (c) the addition of the new item might have some repercussion on the narrative performance of the subconscious;
- (d) such performance will translate into overt action when the consumer is faced with a choice in reality before otherwise equivalent products;
- (e) ultimately, a choice will be made in favor of the product advertised.

These and similar notions lead to a preliminary understanding of the internal mechanism underlying the societal phenomenon of advertising,

notions which are subject to formalisation in a way similar to syntactic structures in generative grammar.¹

Narrative stratagems in advertising are essentially of two kinds. Consider:

- (1a) X takes the chance of buying product N, etc.,
- (1b) so why don't you (buy product N).
- (2a) X doesn't take the chance of buying product N, etc.,
- (2b) so why should you (buy product N).

Strings (1a)1b and (2a)2b are grammatical on all levels of linguistic competence, whereas strings (1a)2b and (2a)1b are grammatical on the levels of phrastic and metaphrastic competence but agrammatical on the level of narrative competence. String (1a)1b characterizes a commercial proper, string (2a)2b a "countercommercial". Countercommercials may be used to elicit reactions which are contrary to the intentions professed in overt structure. If we are to take seriously Halle's 1962.64 reasoning concerning deterioration in the adult of the ability to construct optimal grammars on the basis of a restricted corpus of examples, we must assume that string (2a)2b will be more efficient with adults, whereas string (1a)1b is bound to impress primarily upon children.

If we are to reduce the phenomenon of advertising to some sort of societal control, a formal study of its operational assumptions should be of interest to both mathematicians and linguists, the opinions of Hall, Hockett & Messing 1973 notwithstanding. Indeed, advertising and similar practices of controlling the "masses" are too important an issue to humanity to be left untended.

Truth is a linguistic question.²

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¹Minsky's objections to the use of generative grammar in artificial intelligence can hardly be called realistic if models for writing and understanding commercials are empirically adequate simulations of the ideal subject's fragment competence. Cf. Tusseau & Wittmann's 1973 attempt to reconstruct larger fragments of narrative competence in mediaeval French authors.

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