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The effect of sentence context on word recognition in second- and sixth-grade children

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SECOND- AND SIXTH-GRADE children named words preceded by either congruous, neutral, or incongruous contexts that were either one or three sentences long, and were drawn from second-grade reading materials. Both groups displayed significant contextual facilitation and contextual inhibition effects on naming time. The effects did not depend upon the length of the prior context, indicating that within the limits of the manipulation employed in this experiment, the contextual effects on word recognition arose primarily from within the sentence containing the target word. The second-grade subjects displayed larger context effects than the sixth-grade subjects. The implications of these findings for current model of context effects on word recognition are discussed.

L'effet de contexte de phrase sur la reconnaissance de mots parmi les enfants de la sixième et dixième

DES ENFANTS de sixième et dixième ont nommé des mots précédés de contextes incongrus, neutres ou congrus dont la longueur était d'une ou trois phrases, ceux-ci étaient tirés de matériel de lecture de la dixième. Les deux groupes ont montré une facilité contextuelle significative et des effets d'inhibition contextuelle sur la désignation temporelle. Les effets ne dépendaient pas de la longueur du contexte précédent, indiquant que dans les limites de la manipulation employée dans cette expérience, les effets contextuels sur la reconnaissance de mots provenaient essentiellement de la phrase contenant le mot à objectif. Les sujets de dixième ont montré des effets de contexte plus grands que ceux des sujets de sixième. On a discuté les conséquences de ces découvertes pour les modèles courants des effets de contexte sur la reconnaissance de mots.

Los efectos de contexto de oración en el reconocimiento de palabras por alumnos de segundo y sexto grado

ALUMNOS DE SEGUNDO y sexto grado recitaron palabras precedidas por contextos congruentes, neutros, o incongruentes, de una o tres oraciones de longitud, y que eran extraídas de textos de lectura de segundo grado. Ambos grupos mostraron efectos significativos de facilidad y dificultad contextual durante el tiempo de recitación. Los efectos no dependieron de la longitud del contexto previo, indicando que dentro de los límites de la manipulación empleada en este experimento, los efectos contextuales en el reconocimiento de palabras originaron principalmente dentro de la oración conteniendo la palabra clave. Los alumnos de segundo grado mostraron efectos contextuales mayores que los alumnos de sexto grado. Se discuten las implicaciones de estos resultados sobre los modelos actuales de efectos de contexto en el reconocimiento de palabras.

In recent years, several studies have appeared in which discrete-trial reaction-time techniques have been employed to investigate individual differences in the effects of sentence context on word recognition (e.g., Perfetti, Goldman, & Hogaboam, 1979; Perfetti & Roth, 1981; Schwantes, 1981; Schwantes, Boesl, & Ritz, 1980; Stanovich, West, & Feeman, 1981; West & Stanovich, 1978). The general procedure has involved measuring the time taken to recognize a target word preceded by either a congruous or an incongruous sentence context. The recurring finding has been that the overall context effect (the time difference between the congruous and incongruous conditions) displayed by the less skilled or younger readers has been somewhat larger than that displayed by skilled or older readers. This result has led to some theoretical speculations (e.g., Perfetti & Roth, 1981; Stanovich, 1980) about how contextual and stimulus information interact to sustain the rapid word recognition that is characteristic of fluent reading, and how this interaction changes as reading skill develops.

The West and Stanovich (1978; Stanovich, West, & Feeman, 1981) studies also employed a neutral condition that allowed the overall context effect to be partitioned into facilitation (recognition time in the congruous condition subtracted from recognition time in the neutral condition) and inhibition (recognition time in the neutral condition subtracted from recognition time in the incongruous condition) components. Significant facilitation and inhibition effects were found for second-grade, fourth-grade, and sixth-grade subjects (Stanovich, West, & Feeman, 1981; West & Stanovich, 1978), but adults have repeatedly displayed much larger facilitation effects than inhibition effects, the latter often not reaching significance (Stanovich & West, 1979, 1981, 1983a, 1983b, West & Stanovich, 1978, 1982). This pattern of results has been interpreted (see Stanovich & West, 1983a, for details) as supporting a two-process model of sentence context effects on word recognition. The two contextual mechanisms hypothesized were a fast-acting process of spreading activation in semantic memory and a slower acting capacity-demanding process of conscious contextual prediction.

The sentences used in the studies cited above were constructed by the experimenters, however, and had very similar syntactic structures and contained an unusually large number of context-word/target-word semantic associates. In the present experiment we attempted to see whether the basic data patterns previously obtained would be observed when the stimulus materials were a more representative subset of sentences taken from a sampling of second-grade readers. An additional variable included in the study was the amount of contextual material preceding the target word. The West and Stanovich (1978; Stanovich et al., 1981) studies employed only the incomplete sentence that preceded the target word. Thus, any additional contextual facilitation from material prior to the sentence containing the target word was not assessed. To investigate this issue, the length of the textual segment (either one sentence or three sentences) preceding the target word was orthogonally varied with the context condition. Since subjects of two ages (second- and sixth-grade children) were tested, it was possible not only to replicate previous developmental results with single sentences, but to investigate whether the use of larger text segments to facilitate word recognition develops with increasing reading experience.

The inclusion of the context length variable provides an indirect test of Becker's (1982) recent argument that context effects on word recognition can be explained in terms of two different strategies that subjects may adopt. He argued that when the contexts are highly predictive of the target word, subjects tend to adopt what is termed the prediction strategy which results in facilitation dominance (large facilitation effects and minimal or nonexistent inhibition), whereas when the contexts are of low predictability, subjects tend to adopt the expectancy strategy which results in inhibition dominance (large inhibition effects and minimal or nonexistent facilitation effects).

Becker (1982) reported data indicating that the two contextual patterns previously

observed in adult subjects (Becker, 1980) are also obtained when analogous materials are employed with third- and fifth-grade subjects. Although single-word rather than sentence contexts were employed as stimuli, Becker (1982) clearly views the two-strategy theory as having some generalizability to the sentence context situation. Thus, it is relevant that two pieces of evidence[1] from the sentence context literature that are problematic for the two-strategy theory were ignored in the Becker (1982) paper. The sentence contexts used by Stanovich and West (1981, 1983a) had a fairly wide distribution of predictability and a reasonably low mean predictability (see the Method and Appendix of Stanovich & West, 1981). Certainly they were not highly predictable. Yet they displayed a recurring pattern of facilitation dominance (Stanovich & West, 1981, 1983a, 1983b). Secondly, in a study employing second-grade subjects. Stanovich et al. (1981) found that the sentence context effects on easy target words were facilitation dominant, while the context effects on difficult target words were not. Since the target words were randomized, subjects could not have anticipated which type of word would appear and changed their strategy accordingly. Thus, the result is highly problematic for the two-strategy theory.

A third result, that mixed patterns of context effects (nondominant patterns of roughly equal amounts of facilitation and inhibition) are also observed (e.g., West & Stanovich, 1978), may seem problematic for the two-strategy theory, but it can possibly be explained. As Becker (1982) correctly points out, such a pattern could occur through averaging the scores of a group of subjects comprised of some who displayed a facilitation-dominant pattern and some who displayed an inhibition-dominant pattern. However, this conjecture can be tested empirically. It predicts that across subjects there should be an extremely strong negative correlation between facilitation and inhibition. One problem with testing this prediction is that the facilitation and inhibition effects that are correlated for each subject should not be calculated from the same neutral condition. In context experiments where independent variables are manipulated, materials are routinely counterbalanced across subjects so that although each subject sees the same set of words, the different context conditions contain different sets of words for each subject (across subjects, each word appears in each of the context conditions). If by chance a subject received a set of words in the neutral condition that are more difficult than average, his inhibition score will be reduced and his facilitation score simultaneously increased. The corresponding subject who receives easier than average neutral words will have his facilitation and inhibition scores simultaneously inflated and depressed, but in the opposite direction. In short, variability in the neutral condition insures some degree of negative correlation between facilitation and inhibition. Inclusion of the sentence length variable in the present study provides a possible way around this problem. Should this variable fail to interact with context condition, it would indicate that subject strategies were similar across the two context lengths (or the extremely unlikely alternative that equal numbers of subjects switched strategies in opposite directions when going from one to three sentences). Thus, correlations between facilitation in the one-sentence condition and inhibition in the three-sentence condition and between inhibition in the one-sentence condition and facilitation in the three-sentence condition can be calculated. These correlations involve different neutral conditions for each subject, yet provide a test of the two-strategy explanation for mixed patterns of facilitation and inhibition.

The experiment to be reported employed second- and sixth-grade subjects. Subjects as young as the former have been little studied using the more precise discrete-trial reaction-time techniques for assessing contextual effects on word recognition. The stimuli were drawn from typical reading materials rather than being constructed to have unusually high predictability and associative relationships, as well as uniform syntactic structures. This will allow the assessment of whether contextual patterns derived from materials having

the latter properties (e.g., Stanovich et al., 1981; West & Stanovich, 1978) generalize to a wider range of stimuli. The amount of context preceding the target word was varied in order to assess whether there are contextual effects from sentences preceding the sentence containing the target word, effects that would not be detected by single-sentence context studies. Correlations between context effects across levels of the sentence length variable will provide a test of whether the two-strategy theory of context effects can be generalized beyond the single-word priming situation to the sentence context situation.

Method

Subjects

The subjects were 16 second-grade children (9 males and 7 females) and 32 sixth-grade children (20 males and 12 females) recruited from four classrooms in a predominantly middle-class elementary school. The mean age of the second-grade children was 8 years, 2 months, and the mean age of the sixth-grade children was 11 years, 7 months. The subjects were tested in May. The second-grade children were administered the Reading Survey Test of the Metropolitan Achievement Tests (Primary 1, Form JS) and attained a mean grade equivalent of 4.6 (standard deviation = 1.4). Twenty-six of the sixth-grade children had been administered the Reading Survey Test of the Metropolitan Achievement Tests (Intermediate, Form JS) in the fifth grade and attained a mean grade equivalent of 8.8 (standard deviation = 2.9).

Stimuli and Apparatus

Forty-eight segments of text were selected from six second-grade readers (*A Second Look*, Macmillan, 1975; *Basic Reading, Book E*, McCracken-Walcutt, 1975; *Get Set*, Merrill, 1975; *Our Country*, Open Court, 1976; *Stand Tall*, Macmillan, 1975; *Step Up*, Merrill, 1975). Each segment consisted of the first three consecutive sentences of a paragraph in the middle of a story (no plays or poems were used). Within this constraint, selection of segments was random with the exception that segments longer than 252 character spaces, segments ending in a proper noun, or segments ending with the same word that ended another segment were not used. The terminal words of each segment were deleted and used as target words. The remaining words of the segments were used to form contexts of two types: (a) three-sentence contexts that consisted of the remaining words of each segment after the terminal word was deleted (e.g., "Sometimes, a wet blanket of fog comes in. Storms of wind and rain hit the coast. Sailboats and rowboats are tossed up onto the"), and (b) one-sentence contexts that consisted of the remaining words of the third sentence of each segment (e.g., "Sailboats and rowboats are tossed up onto the"). In 14 cases target words were repetitions of words in the 48 three-sentence contexts. One such repetition occurred in the 48 one-sentence contexts. The mean number of letters in the target words was 4.8 (range = 3-10). According to the Kucera and Francis (1967) count, the mean frequency of the target words was 687. The mean number of words in the first sentence of the 48 segments was 10.6, the mean number of words in the second sentence was 10.0, and the mean number of words in the third sentence was 10.1.

Congruous context conditions were formed by presenting target words with their corresponding three- and one-sentence contexts (e.g., "Sailboats and rowboats are tossed up onto the" was considered congruous with "rocks"). The three- and one-sentence contexts were randomly organized into pairs. Incongruous context conditions were formed by presenting targets with the opposite members of the three- and one-sentence context pairs (e.g., "Sailboats and rowboats are tossed up onto the" was considered incongruous with "sleep"). Three neutral three-sentence contexts were created by presenting the following contexts prior to a target: (a) "Bob had another question that he wanted to ask. He asked what the last word in the sentence was. They said it was," (b) "Bill wanted to know what the next word was. Mary also wanted to know. The next word was," (c) "The class

thought of a new word. Jane tried to guess the word. They were thinking about." Three neutral one-sentence contexts were created by presenting just the last sentence from each of the neutral three-sentence contexts.

Stimuli were presented on a CRT monitor with a refresh cycle of 16.7 msec under the control of an Apple II microcomputer. All letters were uppercase, and were presented at a viewing distance of 64 cm. Five-letter words subtended a horizontal visual angle of approximately 1.88 degrees, and the space between words subtended a horizontal visual angle of approximately .45 degrees. When either a three- or one-sentence context and a target word were displayed together on the CRT, the last sentence looked like a complete sentence. There were always at least two words from the sentence context (i.e., the last two words) on the display line that contained the target word. Sentence contexts remained present on the screen after target onset. Target onset and timing were controlled by a button pushed by the experimenter that immediately caused the target to be displayed and simultaneously started a Mountain Hardware millisecond clock that was interfaced with the microcomputer. When the subject responded verbally to the target, a voice-activated relay stopped the clock. Prior to the collection of the data, the experimenter was given extensive practice in synchronizing the pushing of the control button with the last word of the sentence context. Of course, some time invariably elapsed between the subject's articulation and the experimenter's button press. However, the experimenter tried to minimize this time by attempting, on all trials, to initiate her button press with the articulation of the last sentence context word such that the button was activated as soon as possible after the end of the articulation. The experimenter was instructed to develop a criterion so stringent that it occasionally resulted in her pressing the button during the articulation, thus aborting the trial. There were only a few experimenter-aborted trials, but those that did occur were distributed approximately equally across all experimental conditions, indicating that the criterion was consistently applied.

Procedure

Subjects were individually tested in a session that lasted approximately 30 minutes. Subjects were told to look at the CRT and read aloud the sentence contexts that appeared. In addition, they were instructed to verbally respond to the target words as rapidly as possible when they appeared. The subjects were told that only the vocal response to the target was timed, so they were free to read the contexts at a comfortable pace.

Each subject received a random ordering of six practice trials consisting of one trial given under each of the conditions formed by the factorial combination of context condition (congruous, incongruous, neutral) and context length (a three- or a one-sentence context). Following the practice trials, each second-grade subject received a random ordering of 32 experimental trials consisting of 8 trials given under each of the 2 congruous context conditions and 4 trials given under each of the 2 incongruous and 2 neutral context conditions. Each sixth-grade subject received a random ordering of 48 experimental trials consisting of 12 trials given under each of the 2 congruous context conditions and 6 trials given under each of the 2 incongruous and 2 neutral context conditions. The assignment of target words to context conditions was counterbalanced across subjects so that each word was seen twice as often under congruous context conditions as either incongruous or neutral context conditions. No subject saw the same target word or sentence context more than once in the course of the experiment. When sentence contexts were used in incongruous context trials, their deleted terminal words were used as target words in neutral context trials that were always separated from the sentence context presentations by several trials (approximately 16 and 24 trials for the second- and sixth-grade subjects, respectively).

Results

Trials on which the subject incorrectly named the target word, trials on which the response time was greater than 2000 msec,

Table 1 Mean reaction times in milliseconds and mean percentage of errors indicated in parentheses

Context Length	Context Condition			Facilitation	Inhibition	Overall Context Effect
	Congruous	Neutral	Incongruous			
Second Grade						
One sentence	627(7.0)	726(6.3)	819(9.4)	99	93	192
Three sentences	613(7.0)	697(3.1)	756(9.4)	84	59	143
Sixth Grade						
One sentence	511(2.9)	554(2.1)	601(1.6)	43	47	90
Three sentences	487(4.7)	540(2.6)	599(6.3)	53	59	112

and trials on which the response time was more than 2.5 standard deviations above the mean for that condition were scored as subject errors and dropped from the reaction-time analysis. The mean reaction time in each condition for each subject was used in the analysis of variance (ANOVA). The mean reaction time in each context condition is displayed in Table 1, along with the magnitudes of the facilitation effect, the inhibition effect, and the overall context effect (the difference between the congruous and incongruous conditions). The mean percentage of errors is indicated in parentheses.

An overall ANOVA on the reaction times indicated that the main effects of grade, $F(1, 46) = 29.5$, and context condition, $F(2, 92) = 55.2$, were significant at the .001 level, while the main effect of context length was not significant, $F(1, 46) = 3.94$, $.05 < p < .10$. There was a significant interaction between grade and context condition, $F(2, 92) = 3.48$, $p < .05$. Larger context effects were shown by the second-grade subjects. Neither the context length by context condition interaction ($F < 1$), nor the three-way interaction, $F(2, 92) = 1.01$, was significant.

A separate ANOVA on the data from the second-grade subjects indicated that the effect of context condition was significant, $F(2, 30) = 17.0$, $p < .001$, but the effect of context length, $F(1, 15) = 1.34$, and the context condition by context length interaction ($F < 1$) were not significant. Similarly, a separate analysis on the data from the sixth-grade subjects indicated that the effect of context condition was significant, $F(2, 62) = 41.6$, $p < .001$, but the effect of context length, $F(1, 31) = 2.51$, $p > .10$, and the interaction ($F < 1$) were not. Planned comparisons indicated that all of the facilitation and inhibition effects for both grades were significant at the .05 level, except the 59 msec inhibition effect for the second-grade subjects. None of the basic data patterns are obscured by speed-accuracy tradeoffs.

Since a mixed pattern of facilitation and inhibition occurred in all conditions, and there was no context length by context condition interaction for either grade, the conditions for a test of the two-strategies prediction were achieved. Facilitation scores in the one-sentence condition were correlated with inhibition scores in the three-sentence condition. These correlations were .37 and -.11 for the second- and sixth-grade subjects respectively. The correlation between facilitation in the three-sentence condition and inhibition in the one-sentence condition was -.14 for the second-grade subjects and .04 for the sixth-grade subjects. None of these correlations were significant.

Discussion

Large context effects, manifested as both facilitation and inhibition, were observed for both groups of subjects. The contextual effects observed were just as large (in fact, somewhat larger) as those obtained from this

paradigm when a less representative set of stimuli were employed. Thus, the context effects previously observed appear not to have been due to spuriously high levels of predictability or contextual associations, or to the use of an overly uniform set of syntactic constructions. Of course, the magnitudes of the contextual effects observed in the present experiment are not meant to serve as parameters estimates for the likely effect of context on the average word in text. Selection restrictions such as the sampling of only terminal words as targets insured that these words were still markedly above average in terms of predictability and contextual associations.

The contextual effects were not increased, nor altered in pattern, by presenting three prior sentences rather than one. The interaction between context condition and context length was not significant, and there was no three-way interaction of these variables with grade level. Of course, one could always argue that a difference would have been obtained had larger portions of text been employed. However, in most cases, three sentences were enough to introduce and reiterate at least some minimal theme. What the results indicate is that this additional information did not increase the contextual effect on word recognition that obtains from a single sentence. Perhaps larger units of text would have such an effect, but alternatively, such a manipulation may be more effective at altering comprehension processes rather than the word-recognition processes that are tapped by this paradigm.

A significant interaction between context condition and grade level was obtained, indicating that the younger readers displayed larger context effects (all of the contextual trends were also apparent when the context effects were expressed as a percentage of the neutral condition). This interaction has been displayed before in similar paradigms (Schvaneveldt, Ackerman, & Semlear, 1977; Schwantes, 1981; Schwantes et al., 1980; Stanovich et al., 1981; West & Stanovich, 1978). An analogous interaction between context condition and reading ability within an age group also occurs (Perfetti et al., 1979; Perfetti & Roth, 1981; Simpson, Lorsbach, & Whitehouse, 1983). It was the existence of such interactions that led Stanovich (1980, 1982) to develop the idea of compensatory processing, that under some conditions poor decoding skills can lead to a greater reliance on contextual information. Becker (1982), who disputes the exact *mechanism* proposed by Stanovich (1980) to explain the compensatory interaction, also agrees on the *existence* of the interaction, since it occurs in his own data. Finally, several studies using markedly different paradigms, such as studies of oral reading errors (Allington & Fleming, 1978; Biemiller, 1970, 1979; Coomber, 1972; Juel, 1980; Perfetti & Roth, 1981; Weber, 1970; Whaley & Kibby, 1981), timed text reading (Allington, 1978; Biemiller, 1977-1978; Doehring, 1976), and studies of responses to text alterations (Allington & Strange, 1977; Ehrlich, 1981; Schwartz & Stanovich, 1981; Strange, 1979), have all uncovered evidence of compensatory processing.

The relatively equal amounts of facilitation and inhibition shown in this experiment are, on the surface, problematic for the two-strategy explanation of context effects. That theory is only saved from this result by assuming that the data pattern derives from the combination of groups of subjects showing opposite dominance patterns (if it is argued that subjects change their strategies from trial to trial, then the theory is not predictive at all). However, there was no negative correlation between the facilitation and inhibition effects shown by the subjects.[2] Thus, there are now at least four data patterns from sentence context experiments that cannot be accounted for by the two-strategy theory: (a) the present finding that patterns of mixed dominance were obtained in the absence of any evidence that they were caused by individual differences; (b) the finding of facilitation dominance for the low predictability sentences used by Stanovich and West (1981, 1983a, 1983b; West & Stanovich, 1982); (c) the finding of different patterns of facilitation and inhibition for easy and difficult target words even when the appearance of a particular type of target could not be predicted, due to randomization (Stanovich et al., 1981); (d) the finding that

the sentences used by Fischler and Bloom (1979) and those used by Stanovich and West (1981) show significant inhibition in a lexical-decision task, but not in a naming task (Stanovich & West, 1983a; West & Stanovich, 1982).

These four problematic findings all derive from sentence-context word-recognition experiments, rather than from the single-word priming paradigm which has been the source of the bulk of the data supportive of the two-strategy model. Thus, the latter must be weighed against the general lack of direct evidence from sentence-context experiments that is strongly or specifically supportive of the two-strategy model. The interpretation of the results from a study by Eisenberg and Becker (1982) that did employ another task (sentence verification) requires a crucial caveat particularly important for those readers who will not be consulting the original article. Becker (1982) states, "Eisenberg and Becker (in press) have shown that individual differences in semantic strategy selection both in word recognition and in sentence processing are related to individual differences in reading" (p. 483). Readers will certainly jump to the conclusion that semantic strategy selection has been related to individual differences in reading *ability*, but this is not the case. The strategies were actually related to individual differences in the extent to which subjects altered their reading rates in response to variations in passage difficulty. In a footnote, Eisenberg and Becker (1982) report that the semantic strategies were *not* related to average reading rates.

The failure to find a correlation between facilitation and inhibition is also problematic for the time-locked two-process model of sentence context effects that we had previously utilized (Stanovich & West, 1979, 1981; West & Stanovich, 1978). That theory predicts a positive relationship between these two variables, since the mechanism responsible for producing inhibition also produces facilitation. The prediction is not as strong as that deriving from the two-strategy view, because in the two-process model there is another unrelated process (spreading activation in semantic memory) that contributes to facilitation (see Neely, 1977). Nevertheless, there was no evidence for even a relationship of weaker strength. It is becoming increasingly clear (cf. Schvaneveldt et al., 1977; Stanovich et al., 1981; West & Stanovich, 1978) that the developmental trends in studies of the effect of context on word recognition appear to be more stable than the data patterns involving individual differences within an age group.

While we cannot endorse the conclusions arrived at by Becker (1982), we are in complete agreement with the conclusions of the Eisenberg and Becker (1982) article (where, in addition, a more balanced presentation of the current state of the evidence regarding the two-process and two-strategy models appears) that, "difficulties exist for each model.... It is becoming apparent that there is some truth in each of these models.... What seems needed is a synthesis" (p. 753). Indeed, we feel that such a synthesis is well under way. Becker (1982) argued strongly against the time-locked assumption of our previous conceptualization of the two-process theory (Stanovich & West, 1979, 1981), that is, the assumption that the attentional expectancy process is necessarily invoked when word recognition is slow and is only precluded from an influence on performance by time constraints. Our most recent data (Stanovich & West, 1983a) has led us to relax the time-locked assumption and to allow the attentional mechanism to become implicated in performance based on certain stimulus and strategic factors. Thus, this mechanism is operating more like one of the strategies in the two-strategy model. However, we retain the distinction between contextual effects due to automatic spreading activation and those due to conscious, capacity-demanding strategies, because we see a wealth of direct and indirect evidence indicating the usefulness of the distinction. It is probably in this direction that modifications of the two-strategy model will occur, since it presently does not address important capacity issues (LaBerge & Samuels, 1974; Perfetti & Lesgold, 1977) or the issue of the existence of interactive-compensatory trends (Stanovich, 1980, 1982) that both Becker (1982) and the present authors agree must be explained.

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Footnotes

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[1]A third problematic result (see West & Stanovich, 1982), that inhibition can be caused by the response requirements of the lexical-decision task used by Becker (1980) and others (Fischler & Bloom, 1979, 1980), appeared too late to be cited in the Becker (1982) paper. Nevertheless, it now appears that the inhibition in the Fischler and Bloom (1979) sentence context experiments, that Becker (1980) attributed to the use of the interference-causing expectancy strategy, was more a function of the response requirements of the lexical-decision task than of any "strategy" selected by the subject (Stanovich & West, 1983a; West & Stanovich, 1982). Our finding that the pattern of results obtained with the Fischler and Bloom (1979) materials depends on whether a naming or a lexical-decision task is employed has led to some potentially useful proposals for how the postlexical effects of sentence contexts may be separated from lexical effects. It also suggests care in comparing results from naming and lexicl-decision tasks, because the distinction between context effects on word recognition and context effects on postlexical comprehension processes can easily become confused (Mitchell, 1982; Stanovich, 1980, 1982; West & Stanovich, 1982).

[2]A similar analysis was conducted on the data of Stanovich et al. (1981). The difficult words in the first testing period displayed a mixed pattern of facilitation and inhibition and each subject had previously been given practice at naming one-half of the words. The correlation between the facilitation shown on the practiced words and the inhibition shown on the unpracticed words was .13. The corresponding correlation between facilitation on unpracticed words and inhibition on practiced words was .09.