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THE ROLE OF NAME CODING IN A PHYSICAL LETTER MATCHING TASK

by

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A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

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Abstract

The relationship between the conceptualizations of automatic processes proposed by Shiffrin and Schneider (1977) and Posner and Snyder (1975), and Posner's (1978) hypothesis of code isolability is the main question considered here. The particular issue examined is whether codes which automatically activate each other, such as the physical and name codes of letters, are isolable. A priming paradigm was employed to determine the extent to which name and physical codes were accessed in the performance of a physical identity matching task. Some of the primes were physically identical to the target while some were of the opposite case but shared the same name. Posner and Snyder's (1975) criteria for evaluating the automatic and conscious aspects of prime processing were used. The use of name information in the task was discouraged by the instructions and by the introduction of target pairs which were of opposite case but shared the same name.

A significant facilitation of Same responses by physically identical primes was found, but the facilitation resulting from primes related only in name was not reliable. Different responses were significantly slower if the target letters shared the same name, indicating that letter name information was available even when disadvantageous. The priming effects were further analysed by dividing the subjects into two groups on the basis of presence or absence

of facilitation by primes related only in name. The results were interpreted to indicate that the individuals not showing name priming did not have sufficient time to extract the prime name code prior to target presentation. It was suggested that both groups employed similar automatic processes, which differed primarily in speed. In conclusion, considering the apparent unavoidability and inflexibility of target name processing, it was suggested that code isolability did not seem applicable to letter name and shape representations.

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Introduction

Early theories of attention frequently focussed on the stage in processing at which selection occurred (e.g., Broadbent, 1958; Treisman, 1964; Norman, 1968; Deutsch & Deutsch, 1963). More recently a number of reconceptualizations of attention have been proposed that are less dependent on the idea of locus of selection. The attentional resources (Norman & Bobrow, 1975) or effort (Kahneman, 1973) required to perform a task were assumed to determine how many activities could be performed simultaneously. The amount of resources required for a task was often synonymous with intuitive ideas of task difficulty. However, some apparently complex tasks did not appear to interfere much with other tasks, suggesting that they did not require many attentional resources. A common feature of such tasks is that they were well practiced.

Several writers draw a distinction between activities that appear to require attention and activities that appear to be automatic (LaBerge, 1975; Neisser, 1967). The two theories to be considered here are those of Shiffrin and Schneider (1977) and Posner and Snyder (1975a,b).

Shiffrin and Schneider (1977) distinguish between two types of processes. Controlled processing is described as slow and limited in capacity while automatic processing is rapid and unlimited in capacity. In developing this theory, Shiffrin and Schneider (1977) employed a visual search

paradigm and measured the rate at which people could search accurately. The relationship between accuracy and the number of items to be searched for on any trial (memory set size) was examined. When the relationship between potential memory set items and potential distractors was such that letters appearing as memory set items on some trials also appeared as distractors on others, the rate of search was slow and directly related to memory set size. When the potential memory set items never appeared as distractors search rate was directly related to memory set size at first, but after much practice search rate became very rapid and independent of memory set size.

Shiffrin and Schneider proposed that people had developed automatic detection responses to potential memory set items. Shiffrin and Schneider also demonstrated that performance became extremely poor when the memory and distractor categories were reversed. People reported that it was impossible to ignore the previously relevant items and Shiffrin and Schneider suggest that in such situations people may resort to conscious checking after any automatic processing. Shiffrin and Schneider emphasize that controlled processing is slow but flexible. Automatic processing is rapid and independent of memory load, but is very inflexible. Strategies and intentions have virtually no effect on established automatic sequences, and the unlearning of such sequences may take longer than their initial establishment.

Posner and Snyder's (1975a,b) distinction between conscious and automatic processes has many features in common with the Shiffrin and Schneider (1977) formulation, although there are important differences in emphasis. Posner and Snyder developed their theory from experiments employing a priming paradigm. In the most important demonstration, a letter matching task was employed and response time was measured. A letter prime preceded each trial, and the validity of the prime, or proportion of trials on which the prime was related to the target, was varied between conditions in order to manipulate the amount of conscious attention people devoted to the prime. Reduction of response time by prime presentation is assumed to occur as a result of commonalities between the representations activated by the prime and the target. The prime provides or activates some of the information used in target processing. This aspect of priming is generally considered to be similar whether or not conscious attention is devoted to the prime. Posner and Snyder found distinctly different patterns of results for the high and low prime validity conditions. In the high validity condition response times following relevant primes were reduced relative to a neutral prime condition (benefit) at all but the 10 msec prime-target interval. Response times for targets preceded by irrelevant primes were similar to response times following neutral primes at prime target intervals less than 300 msec. At longer prime-target intervals, irrelevant primes slowed

responses relative to the neutral prime condition (cost). In the low validity condition, related primes still facilitated responses, though to a lesser extent than in the high validity condition. Irrelevant primes did not slow responding relative to a neutral plus prime condition.

Posner and Snyder propose that two types of processes are implicated. The first is automatic processing, which is fast acting and unlimited in capacity. In a low validity prime condition facilitation of primes is assumed to be the result of fast prime processing. The unlimited capacity of automatic processing is assumed to account for the absence of cost when the prime is irrelevant. The second type of processing is conscious attentional processing, which is limited in capacity and relatively slow acting. It is assumed to produce the results found in a high validity prime condition. The facilitation produced by relevant primes is larger when they are attended than when they are automatically processed. The application of limited capacity conscious attention is assumed to result in an inhibition of the processing of irrelevant material, which explains the cost produced by irrelevant primes in a high validity condition.

The emphasis in both theories (Posner & Snyder, 1975a,b; Shiffrin & Schneider, 1977) is on the rapidity and unlimited capacity of automatic processing and on the slowness and limited capacity of conscious processing. Both

theories of conscious or controlled and automatic processes appear to assume that the two processes could be applicable to any type of material. Both of the experiments described used letter stimuli, and the extraction of physical features would have been sufficient for either task. However, both theories are considered to be generalizable to much more complex classes of stimuli. Shiffrin and Schneider also describe the automatic detection of digits among letters, and Posner and Snyder describe word matching tasks which support their two process model. Neely (1977) employed a lexical decision task with semantic category primes in an experiment that strongly supports Posner and Snyder's view of conscious and automatic processing.

Posner has been a strong advocate of the idea that any stimulus may have a number of possible mental representations. A typical instance of a stimulus with alternate codes is a letter. There have been many demonstrations of differences between the physical or shape code of a letter, and its phonemic or name code. Posner's (1968) finding that people could match letters faster when given instructions to match on the basis of physical identity than when instructed to match on the basis of name identity was originally considered to support a processing model in which simple physical codes were extracted prior to more complex codes. However later evidence suggested that the order of processing or of code extraction is not invariant. As an example, Posner (1978) proposed that the

effect of inverting a letter was to delay access to the physical code without affecting the time at which the name code is available. This exemplifies Posner's contention that name and physical codes are independently accessible or isolable. The concept of isolability was operationalized by stating that the time courses of isolable codes can be manipulated independently. In support of the isolability concept, Posner cited the finding that people can reject letter pairs which are identical in name but physically different as rapidly as they can decide that completely unrelated letters are different under physical match instructions. This indicates that name codes can be avoided or sufficiently delayed to prevent interference on a physical task, but it has been difficult to replicate this important result consistently (Anderson, 1975, cited in Posner, 1978; Petruk, 1980).

The relationship between isolability and automatic and conscious processing has not been examined. The issue to be considered here is the isolability of the name and physical codes for letters, i.e., whether name coding of letters can be avoided when a physical matching task is performed. The hypothesis advanced here is that once letter name extraction has become automatic (presumably the case for literate adults), it is unavoidable. It is proposed that processing cannot be terminated and a decision made prior to the availability of a name code. The question is whether isolability is a term usefully applied to codes, such as

those of letters, which form a sequence or automatically activate each other.

The study reported here utilizes a priming paradigm. Priming is especially useful in that it can be used to determine the codes affecting target processing (e.g., Warren, 1975) in addition to distinguishing conscious from automatic processing (Posner & Snyder, 1975; Neely, 1977).

In the study described here, an attempt was made to examine the isolability concept. A physical identity letter matching task was employed, but priming provided the means to evaluate the extent to which name codes were accessed. The primes presented on trials requiring Same responses were of four types. Thirty per cent of the primes were physically identical to the target letters, 30% shared the same name but were of the opposite case to the target pair, 20% were neutral plus (+) primes, and 20% were unrelated letter primes. Corresponding prime types were presented on trials requiring a Different responses. One approach to the isolability hypothesis is to assume that it implies that the time course of physical and name codes can be manipulated in such a way that only one code is activated rapidly enough to produce effects on responding. If this is an accurate interpretation of the isolability hypothesis, and physical codes alone were employed in the decision processes relevant to each target pair, facilitation relative to the plus prime condition should only occur on trials preceded by physically

identical primes. Name related primes should have no effect since the name code of the target need not be accessed to perform a physical match, even if the prime had previously activated its name code.

Only 30% of the primes were physically identical to the targets, thus as in Posner and Snyder's (1975b) low validity prime condition, only automatic prime processing should occur. However, if name codes were employed in the present task, 60% of primes and targets would be related, and conscious name processing could be expected.

To test the conditions under which automatic name processing will occur, the experimental task was designed to make name processing detrimental to rapid and accurate responding. The critical items introduced for this purpose were target pairs in which the two letters shared the same name but were of opposite case. In a physical matching task the appropriate response to these Same-Name Different Case pairs is Different. Name processing would be disadvantageous to rapid and accurate responding to these items, because the information that the two letters shared the same name might lead to a tendency to respond Same. If only physical codes were employed, the conflicting response problem would never arise, and responses to Same-Name Different Case trials would be no slower than responses to Different Name Different Case trials.

If name and physical codes are isolable and if a

physical processing strategy is adopted in the present task, name related primes should produce no facilitatory effects. Since the occurrence of Same-Name Different trials was unpredictable, there was no way of knowing if name processing would be counterproductive for a particular target pair. Hence, the development or use of a consistent strategy appears to be necessary. In short, if there is to be no interference from name information on Same-Name Different trials, there can be no facilitation on name primed Same trials.

Quite different effects would be anticipated if the processing of physical and name information is automatic in the sense described by Shiffrin and Schneider (1977). The processing of name information would be unavoidable, but its rate could be affected by situational variables such as the presence of a prime. If name related primes speed name processing, faciliation should be present on Same trials preceded by name related primes. However, the unpredictable occurrence of Same-Name Different trials should result in interference if target name processing is unavoidable.

An additional hypothesis concerned the effects of the frequency of Same-Name Different trials on the magnitude of priming on Same trials. It has been found previously that manipulations which slow target processing frequently enhance the magnitude of priming effects (Meyer & Schvaneveldeldt,75). It is postulated that if name

processing is unavoidable, increasing the frequency of Same-Name Different trials would increase the difficulty of the physical matching task, and could result in a slowing of responses to maintain accuracy. If this slowing occured it would allow more time for prime information to produce activation, and enlarge the priming effects at short prime-target SOAs (stimulus onset asynchrony). Frequency of Same-Name Different trials was manipulated both within and between subjects to assess this possibility.

Experiment 1

Method

Design and Materials. The target pairs were physically identical on nearly half of the trials (49.5%) and required Same responses. The remaining trials required Different responses. On all trials a prime appeared prior to the target pair. There were four types of prime. On 30% of all trials the prime was physically identical to one or both of the target letters, and on 30% the prime was of opposite case but had the same name as one or both of the target letters. On 20% of the Same trials and 40% of the Different trials a neutral plus sign (+) cue was presented. On the remaining 20% of Same trials the prime was a letter unrelated to either target letter. The probability of an unrelated prime being of same or opposite case to the target pair was equal.

Each observer saw four blocks of 202 trials excluding the practice trials. The first block was a control condition block during which the prime-target SOA was 300 msec for all subjects. During the second block the prime-target SOA was also always 300 msec. The SOAs for the last two blocks were 75 and 25 msec, with these two SOA orders counterbalanced across subjects. All factors described thus far were within subject variables and completely crossed with each other and with the between-subjects variable.

The only between-subjects variable was the proportion

of trials on which the target letters shared the same name but were of opposite case. Under the physical match instructions given in this experiment, the correct response to these Same-Name Different trials was Different. One half of the subjects were randomly assigned to each of two conditions. The Control condition never received any Same-Name Different trials. For this condition, one half of the Different trials were of different name and case, and one third were of different name but same case. The remaining one sixth of trials in the control condition blocks were originally intended to be of different name and case, however, due to a programming error, an upper case pair was always presented, and one member of the pair was always an upper case R. These trials were not used in computing condition and subject medians. There was no reason to predict any systematic effect of this error, nor was there any evidence to support a systematic effect, so the error is not considered further.

The first block of trials for the Same-Name Different Condition were identical to those of the Control condition. The Same-Name Different trials were introduced on the second block of trials and maintained in the third and fourth blocks. This altered the grouping of Different trials to be one-third same name and different case, one third different name and case, and one third different name and same case.

All letters were plotted on an HP 1304A CRT equipped

with P15 fast decay phosphor. Each letter subtended a maximum visual angle of .38 degrees horizontally and .38 degrees vertically. The letters shown were from the set consisting of BCDFGHJMNR and the corresponding lower case letters. Primes were centred .20 degrees above the fixation point and the target pairs were centred .20 degrees below the fixation point. The screen was viewed through a tunnel 75 cm. (26.7 in) in length. An HP9825A computer and HP1,350A graphics translator controlled trial randomization and presentation, and recorded response times. The controlling program is presented in Appendix D.

Subjects Forty seven people volunteered to serve in the experiment. They received either course credit or four dollars for their participation. The native language of 13 of the volunteers was not English and their data were excluded from the analysis. It was assumed that they did not have the same familiarity with the Roman alphabet as did the native speakers of English. Data from two people were discarded because their overall error rate exceeded ten percent. The remaining data, collected from 18 females and 14 males, were analyzed.

Procedure Each trial consisted of a prime (a letter or a plus sign) which appeared for 15 msec immediately after the observer initiated a trial. After a variable interval following the prime, the target pair of letters appeared. The observer decided if the pair were physically identical or not (Same or Different). Response time from target onset and accuracy were recorded. A fixation point acted as a ready signal, indicating that a new trial could be initiated.

Subjects were told that the experiment was about visual information processing and asked to judge whether pairs of letters were identical. The use of the levers for starting each trial and for making Same and Different responses was described. The trial initiation lever was operated by the index finger of the left hand. The Same and Different response buttons were operated by the index and middle fingers of the right hand. For half of the subjects, Same responses were made with the index finger, and Different responses with the middle finger and for the remainder the finger-response relationship was reversed.

The instructions emphasized responding strictly on the basis of physical features. Regardless of the condition to which they had been assigned, they were alerted to the possibility of pairs having the same name and different case and told that the appropriate response to these pairs was Different. Subjects were told to treat the primes as cues or

warning signals for the same-different task. Observers were not told which condition they were in nor were they informed about the relationships between primes and targets. Finally, subjects were instructed to respond as quickly as possible without errors and told to be more careful if they found they made errors. Following these instructions the subject was seated in front of the viewing tunnel before beginning the practice trials and the four subsequent blocks. The first block was preceded by forty practice trials that included at least two of each type of prime target relation presented. Each of the remaining three blocks was preceded by twenty practice trials, with at least one of each pair type presented. Subjects were tested individually, and the total testing time was approximately 50 minutes. There was a short break after the second group of 202 trials. After completing all trials, each participant was told the purpose of the experiment.

Results

The median response time for each condition and subject was calculated and served as the response measure in analysis of variance. The Different trials which were incorrectly presented were not included in the analysis, nor were trials on which errors were made.

Analysis of Same Responses : The median Same responses were analyzed in a 4(SOA) by 4(Prime Type) by 2(Group) by 16(Subjects) analysis of variance. The four levels of the SOA variable corresponded to the four blocks of trials;the initial control block at an SOA of 300 msec, and the subsequent sets of SOAs of 300, 75, and 25 msec. The four types of prime-target relationships were, physically related primes, name related primes, plus primes, and unrelated letter primes. Both SOA and Prime Type factors were within subjects factors and treated as fixed variables. Group was a fixed between subjects variable. The two groups were distinguished by whether or not they were presented with Same-Name Different trials (e.g., Bb).

The prime types led to differential performance, $F(3,90)=24.46$, $p < .01$. A Duncan multiple range test (MS error=745.24, 90 df) at the .05 level of significance indicated that physically primed trials were significantly faster than all other types, and trials preceded by unrelated letter primes were significantly slower than all other types. Name primed trials did not differ significantly from trials preceded by a plus prime. The Prime type means are presented in Table 1.

A significant effect of SOA was also obtained, $F(3,90)=6.73$; $p <.01$. Response time decreased from the first to second 300 msec block probably as a result of practice. Responding was fastest at the 75 msec SOA and slower at the

very brief 25 msec SOA. The means for each block are shown in Table 2, together with the SOA means for Different and Same-Name Different responses.

The only other reliable effect found was an SOA by Prime Type interaction, F (19,270)=6.14; p <.01, which is presented in Table 1. A Duncan multiple range test (MS error=770.2, 270 df) indicated that in the first 300 msec block physically primed trials were reliably faster than all other types. Name primed trials were significantly faster than plus and unrelated prime trials which did not differ appreciably. In the second 300 msec block, responses to physically primed trials were again reliably faster than responses to other types. Name and plus prime means did not differ significantly. Responses on unrelated prime trials were significantly slower than responses on name and plus prime trials. At the 75 msec SOA, only the mean response times to trials preceded by physical and unrelated primes differed reliably. There were no significant effects of prime type at the 25 msec SOA. The presence or absence of Same-Name Different trials did not affect performance on Same trials, F (1,30)=.18, nor did it interact significantly with any other variable (smallest p =.45).

Prime Type differentially affected error rate, F (3,90)=3.08; p <.05. The mean error rates for Physical, Name, Plus, and Unrelated prime types were 2.6, 3.8, 3.0, and 3.9 % respectively. No other factors had a significant

effect on error rate.

To provide a more sensitive test of the effects of the presence of Same-Name Different trials, an analysis of Same responses in the two 300 msec blocks was performed. One group was presented the same type of items in both 300 msec SOA blocks, and these did not include Same-Name Different trials. The other group received Same-Name Different items in the second block. The effects of introducing Same-Name Different trials should be reflected in a Group by Block interaction. The other factors in this analysis were Prime Type and Subjects.

The results of this analysis mirrored the analysis of all Same responses. The effect of Prime Type was reliable, $F(3,90)=23.78$; $p < .01$, as was the Block effect, $F(1,30)=10.12$, $p < .01$. The Block by Prime Type effect was also significant, $F(3,90)=3.06$; $p < .01$. No reliable effects were found in the analysis of error rates for the first two blocks.

The Group by Block interaction was not reliable, $F(1,30)=.55$. This indicates that the introduction of Same-Name Different trials had little or no effect on responding to Same items. As in the first analysis, Group membership did not interact significantly with any other variables nor was there a Group main effect (smallest $p = .46$).

Analysis of Different Responses In the analysis of median Different response times, the within subjects factors were Prime Type, Target case, and SOA. The Prime Type factor had only three levels since there were no unrelated letter primes on trials requiring a Different response. The Target Case factor had two levels, one in which targets were different but were both capital or both small letters (Same Case), and another in which the letters of the target differed in case as well as in name (Different Case). Trials with targets of same name but different case (Same-Name Different) were considered in a separate analysis to be discussed later. The SOA factor had four levels; the two 300 msec blocks, and the 75 and 25 msec SOAs, where SOA, Prime Type, and Target Case were fixed variables. Group membership was a fixed between subjects factor and subjects were treated as a random factor.

The SOA effect was significant, F (3,90)=20.87; p <.01, and was similar to that for Same responses. The means are presented in Table 2. Different case targets led to more rapid responding than was obtained for same case targets, F (1,30)=42.01; p <.01. The means for different case trials and same case trials were 570 and 595 msec respectively. The presence of Same-Name Different trials had no significant effect, nor did the Group variable interact significantly with any other.

In the analysis of error rates, a significant effect of

Target Case was found, F (1,30)=18.6; p <.01. The error rates for Same Case and Different Case different trials were 3.2%and .5% respectively. The Group by Target Case interaction was significant, F (1,30)=5.18; p <.05. The mean error rate and direction of effects were similar for both groups, but the group which received Same-Name Different trials showed a greater difference in errors between same case and different case trials.

An analysis including only the two 300 msec blocks was undertaken to assess the effects of adding Same-Name Different trials on overall responding to Different trials. In this analysis, responses to Same-Name Different trials were again excluded and all other factors were as in the previous Different response analysis. The effects corresponded to those reported above. There was a significant Case effect, F (1,30)=34.66; p <.01, and a significant SOA effect, F (1,30)=25.53; p <.01, which is probably a practice effect. The introduction of Same-Name Different trials did not affect performance on the other classes of Different trials, F (1,30)=.02, nor did it interact reliably with other variables (smallest p =.06, Group by SOA by Prime Type).

Analysis of Same-Name Different Responses Trials with targets having the same name but of different case were compared to appropriate controls to determine whether they were more difficult to respond to than physically different items not bearing the same name. Since only one group saw Same-Name Different trials, Group was not a factor in this analysis. The within subject factors were SOA and Trial Type. There were three levels of SOA corresponding to the second, third, and fourth trial blocks; 300 msec, 75 msec, and 25 msec. The four trial types were as follows; same case different trials preceded by a plus prime (+ BD), different case and different name trials preceded by a plus prime (+ Bd), same name and different case targets preceded by a plus prime (+ Bb), and same name and different case targets preceded by a related prime (B Bb).

The only reliable effect was produced by the Trial Type variable, F (3,45)=7.58; p <.01. The means are presented in Table 3. A Duncan's multiple range test (MS error=2409.6, 45 df) at the .05 level of significance showed that different case and different name trials (+ Bd) were significantly faster than same case different trials, and same case different trials were significantly faster than both types of Same-Name Different trials (+ Bb, B Bb). The means are presented in Table 3. Same-Name Different trials preceded by a plus prime took an average of 43 msec longer than different case and different name trials. Fourteen of sixteen people were slower on Same-Name Different trials

than on different name and different case trials. One person was equally fast on the two trial types and one was 5 msec faster on the Same-Name Different trials. This pattern of results fails to replicate Posner's (1969) finding that Same-Name Different Case trials are not slower than Different Name Different trials under physical matching instructions, and indicates that name processing of the target was occurring.

Discussion

The introduction of Same-Name Different trials failed to have any effect on performance on other types of trials. The Same-Name Different trials were difficult, but apparently did not lead to the adoption of any general strategy or process for attempting to avoid name processing on other types of trials. Since the performance on Same trials and on Different Name Different trials of those who saw Same-Name Different trials did not differ from those who did not, it is probable that both groups were using the same processes in the task.

The Prime effect indicates that physical primes facilitated responding because of physical identity and not simply name identity. However, name identity seemed to be having some effect since name related and unrelated primes differed reliably.

The SOA effects were a combination of practice and warning effects. Performance improved over the two 300 msec

blocks, and was fastest for the 75 msec block. The 25 msec prime-target interval resulted in slower performance, probably because it is too short to be an optimal warning interval.

The SOA by Prime interaction provides some insight into the type of prime processing utilized. Although the physical priming effect increases with SOA and is not reliable at prime-target SOAs less than 300 msec, the priming effects may appear to fit the typical conscious processing pattern described by Posner and Snyder (1975a,b). According to their model of conscious processing there should be no costs for unrelated primes at short SOAs, but at an SOA between 150 and 300 msec, large costs should appear. The present data show a significant cost, which was primarily a result of a significant cost which only occurred in the second 300 msec block. Since some priming trends began to appear at 75 msec, it may be reasonable to class the physical priming as fast and automatic, even though some cost is present.

The effect of target case indicated that some physical features affected Different response times. However the advantage for different case target pairs was not evident for Same-Name Different Case targets. Name information appeared to be available prior to the execution of a Different response based on physical characteristics such as case; if it were not available, Same-Name Different Case trials (Bb) should have been equivalent to different name

different case trials (Bc). Name processing seemed to be occurring even though subjects attempted to follow instructions and did respond in accordance with the physical identity instructions.

Experiment 2

Because of the strong effect of target case on Different response times, it may be that case is an important variable in prime-target relationships on Same trials. Perhaps targets of different case than the prime could be processed differently from target letters of the same case as the prime. Such a change in processing might lead to reduced priming effects, with the prime rendered effectively neutral when it differed in case from the targets, regardless of the nominal prime-target relation. If this were so it is possible that Same trials preceded by unrelated primes of different case than the target (a BB) would not differ significantly from Same trials preceded by name related but opposite case primes (b BB).

Unfortunately, although the probability of an unrelated prime matching or not matching the target case was equal, this relationship was not recorded and the two types of unrelated prime trials were not separable. To test the alternate hypothesis about name priming an experiment similar to the first was performed. The two types of unrelated primes were separately recorded.

Method

The design differed from that of Experiment 1 in only a few particulars. Instead of four types of primes, five types were analysed. Thirty percent of primes were physically identical to one or both targets, and 30% were of opposite case but had the same name as one or both targets. Forty percent of Different trials and 20% of Same trials were preceded by plus primes. On 10% of Same trials the prime was unrelated to the targets but of the same case, and on 10% the prime was unrelated to the targets and of the opposite case.

The same 300 msec SOA was presented for all four blocks, and all subjects were in the Control condition, where no Same-Name Different trials were presented. Four people, three males and one female, were paid four dollars for their participation in the experiment. Except as noted in the Design, the procedure was identical to Experiment 1.

Results

The priming results for Same responses closely replicated those of the original experiment at an SOA of 300 msec. An analysis of variance was performed with two within subjects factors, Prime Type and Block. The Prime Type variable had five levels, Physical Prime, Name Prime, Plus Prime, Unrelated Different Case Prime, and Unrelated Same Case Prime. The four levels of the Block factor corresponded to the four successive blocks of trials at a 300 msec prime-

target SOA.

There was a significant effect of Block, F (3,9)=5.02; p <.05. The Prime effect was also significant, F (4,12)=8.93; p <.01, and a Duncan multiple range test (MS error=1901.2, 12 df) at the .05 level of significance indicated that physically primed trials were significa faster than all other trial types. Name trials did not differ from plus prime trials, but did differ from both types of unrelated prime trials. The mean RTs for each prime type are presented in Table 4.

An analysis of Different responses of the four people in the replication study produced only one statistically reliable effect, a Block by Prime interaction, F (6,18)=4.36; p <.01. Since this effect does not appear to be explicable or relevant to the main issues of the experiment, the analysis is presented in Appendix A and the data are presented in Appendix B but the interaction will not be discussed further.

Discussion

Priming effects were not eliminated when the prime and target differed in case. Even though the name primes do not appear to facilitate processing relative to the plus prime condition, the name commonality between prime and target obviously has some effect. Otherwise, primes related only in name should produce the same effects as other physically unrelated primes.

The most striking effect of the second experiment was not related to the original purpose of the experiment, nor does it appear in the analyses shown above. All four people showed consistent physical priming for Same responses, but there appeared to be large individual differences in name priming. Two people showed substantial name priming relative to the plus prime condition and were assigned to the Name Priming Present Group. The other two people were slower on name prime trials than on plus prime trials, and their performance on name prime trials appeared similar to their performance on unrelated prime trials. They were assigned to the Name Priming Absent Group. In the analysis reported in the preceding section, these name priming effects were combined, resulting in the appearance that name priming had effects similar to those of plus primes.

The data from Experiment 2 were reanalysed, using the same factors as in the previous analysis. but with the addition of the Name Priming Group factor. The analysis of Same responses produced similar effects to the earlier analysis. There was a significant block effect, $F(3,6)=6.37$; $p < .05$, and a significant Prime Type effect, $F(4,8)=29.89$; $p < .01$. In addition, The Name Priming Group by Prime Type interaction was significant, $F(4,8)=8.04$; $p < .01$. The means are presented in Table 5. The basis for selection, must, of course, produce mean differences. This analysis simply shows that this difference is statistically

reliable. There may be reason to extend this analysis to the results of the preceding experiment. Individual differences in name priming may account for the lack of facilitation or cost for name primes found in the first experiment.

The analysis of Different responses with the addition of the Name Priming Group factor provided only one reliable result; the same Block by Prime effect, F (6,18)=8.72; p <.01, that had been found in the earlier analysis of Different responses from the second experiment.

Results

Analysis of same responses. As in the initial analysis of Same resonses the Prime Type, F (3,84)=29.13; p <.01, SOA, F (3,84)=7.82; p <.01, and SOA by Prime, F (9,252)=6.71; p <.01, effects were significant. The Name Priming Group factor interacted reliably with a number of other variables. The Name Priming Group by Prime interaction was significant, F (3,84)=6.37; p <.01, and showed that people selected for name priming during the second 300 msec block tended to show overall name priming on Same responses. As shown in Table 6, a Duncan multiple range test (MS error=625.72, 84 df) at the .05 level of significance yielded different priming effects for the two groups. In the Name Priming Present Group, physically primed Same trials were significantly faster than plus prime trials. The overall pattern of priming for those not showing name priming during the second 300 msec block is markedly different. Physically primed trials were significantly faster than all other Same trials, and plus, name, and unrelated prime trials did not differ from each other.

Although selection did produce some of the effects described above, the division appears to be reflecting a generalizable difference in prime processing, as Name Prime Group enters into another significant interaction, Name Prime Group by Block by Prime Type, F (9,252)=3.18; p <.01. The interaction is presented in Table 7. A Duncan's multiple

range test (MS error=7 .59, 252 df) at the .05 level of significance was performed to determine the important aspects of the interaction. The interaction appears to be partially the result of a difference in priming at the 75 msec SOA. The Name Priming Present Group shows some physical priming at 75 msec while the Name Priming Absent Group shows minimal differences between prime types at that SOA. In addition the Name Priming Present Group tends to show greater physical priming than the Name Priming Absent Group at all SOAs except 25 msec. The last point of interest in this interaction is the finding that at the 25 msec SOA the Name Priming Present Group is fastest when a plus prime precedes the trial, wheras the Name Priming Absent Group does not show any apparent differences between prime types at this SOA. The nature of the interaction suggests that people in the Name Priming Present Group may process the primes more thoroughly or consistently and thus show larger priming effects at shorter SOAs. People in the Name Priming Present Group do not appear to show the large costs indicative of conscious or controlled processing. The short SOA at which priming becomes evident in the Name Priming Present group also argue against an explanation of priming differences that assumes conscious processing. There is a tendency for the Name Priming Present Group to be faster overall, F (1,28)=2.99, p =.095. Although not reliable this difference is consistent across prime types with the Name Priming Present Group 46 msec faster than the Name Priming

Absent Group on plus prime trials. This, combined with the Name Priming Group by Block by Prime Type interaction seems to indicate that people in the Name Priming Present Group are able to process prime and target information more quickly than those assigned to the Name Priming Absent Group.

The error rate analysis produced two reliable results. As in the Same trial analysis, the Prime Type effect on error rate was significant, F (3,84)=3.01; p <.05. There was also an uninterpretable Same-Name Different Trials Group by Name Priming Group by Block by Prime Type interaction, F (9,252)=2.44; p <.05.

Analysis of Same-Name Different responses. A reanalysis of the Same-Name Different data was performed including the Name Priming Group factor. The within subjects factors were Trial Type and SOA. The only significant effect was of Trial Type, F (3,42)=7.67; p <.01. The Name Priming Group by Trial Type interaction was not significant, F (6,84)=1.15; p =.340. All eight people in the Name Priming Absent Group had longer median RTs for Same-Name Different trials preceded by plus primes (+ Bb) than for different case and different name targets preceded by plus primes (+ Bd).

Discussion

The division of individuals on the basis of name priming magnitude in one SOA block appears to reflect more general differences between people. Although a tendency for the Name Priming Present Group to be slow in responding to plus prime trials could have resulted in their selection for name priming, and produced inflated estimates of physical priming, this is an unlikely explanation for two reasons. The first is that the effects are present in blocks other than the one on which selection was based. Secondly, the Name Priming Present Group show a reliable cost for unrelated letter primes when all SOAs are combined, and the Name Priming Absent Group do not. This would not be expected if the Name Priming Present group were just slow on trials preceded by plus primes.

The Name Priming Group by SOA by Prime Type interaction is largely a result of the Name Priming Present group showing more priming effects, and showing them at briefer SOAs. People in the Name Priming Present group may be processing prime information more thoroughly or consistently than the other group. Although a significant cost for unrelated primes was found for the Name Priming Present group (See Table 6), the cost is small and not statistically reliable at any SOAs and does not fit the Posner and Snyder (1975a,b) conscious processing pattern. The tendency for the Name Priming Present group to be faster overall in

responding may indicate that members of the Name Priming Present group were faster at processing letter information. This would not imply that the processes used by the two groups differed qualitatively. One problem with this explanation, however, is the significant cost found on Name and Unrelated prime trials for the Name Priming Absent Group in the second 300 msec block. Since no physical priming occuers at this SOA for the Name Priming Absent Group, the findings do not fit automatic or conscious processing models of prime processing.

The results for Same-Name Different trials support the argument that both the Name Priming Present and Name Priming Absent Groups used similar processes. In particular, name information appeared to affect the processing of Different targets regardless of differences in prime processing.

General Discussion

This study employed a letter matching task with instructions to match on the basis of physical identity. The main conclusions were that people could control neither the codes activated nor the time courses of activation sufficiently to prevent interference resulting from the availability of name information.

Reaction times on same-name different case trials were slow, suggesting that people were unable to adopt a strategy for avoiding name processing. However, even though response times to same-name different-case trials were long, and error rates elevated, the vast majority of responses on such trials were correct. This indicated that people could follow the instructions and respond on the basis of shape.

These findings can be reconciled by assuming that name processing was automatic and not subject to conscious control. On the other hand, it could be assumed that consciously controlled processing permitted a correct response on trials where the name and physical information led to contradictory decisions.

The types of information contributing to same and different responses are considered. It is theorized that the processing responsible for physical priming is automatic, and quite distinct from the processing required for decisions about shape identity.

An attempt was made to show that although there were large individual differences in priming effects, they do not affect the conclusions about target processing outlined above. In short, name processing of targets seems obligatory even if name processing of primes is not.

It is concluded that a code isolability hypothesis such as that proposed by Posner (1978) is not tenable if it requires that physical and name processing of letters be experimentally separable to the extent that only one code produces effects on responding. The results are more in agreement with the model of automatic and controlled processing proposed by Shiffrin and Schneider (1977).

Since Posner and Snyder's (1975b) finding that primes did not facilitate Different responses was replicated in the present study, the Different trials in this experiment will be considered as a simultaneous matching task, and only target processing will be discussed. There appear to be three types of information affecting response time to targets on Different trials. Name information is available prior to response on Different trials and may produce a decision about name identity. This is the source of the difficulties encountered on Same-Name Different Case trials under physical identity instructions.

Physical information contributes to a check for physical identity once name information has become

available. This permits correct decisions on Same-Name Different trials. The notion of a check for physical identity after the completion of name coding is unusual, but is readily testable. If name identity instructions are employed, no checking is required once a Same decision is reached. The usual finding that responses to pairs only identical in name are slower than responses to physically identical pairs should be obtained. If checking is required when physical identity instructions are used, and if checking adds something to RT even when the name and physical decisions do not conflict, the RTs to physically identical pairs should be longer under physical identity instructions than under name identity instructions. This finding would suggest that the physical identity checking was under conscious control, since it could be used if the task demanded it and not used otherwise.

A third type of information, probably crude physical information about dimensions such as size, amount of contour, and brightness, also affects response time. This is inferred from the finding that pairs of different name and different case were significantly faster than responses to pairs differing only in name. Two explanations of this effect will be considered. One explanation is that pairs differing in case are probably more easily encoded because they are more discriminable than letters of the same case. Physical discriminability has previously been assumed to account for the finding that response times to physically

similar pairs such as EF are slower than response times to dissimilar pairs on physical identity tasks (Posner, 1968). However, it must be inferred from the present data that this type of physical discriminability information can only reduce RT by speeding encoding. If responses could be made on the basis of case information alone, there should be no difficulty on Same-Name Different trials. This was clearly not the case.

In his studies of matching processes, Proctor (1980, in press) agrees that decisions are made at the name level on Different trials, and in many cases, on Same trials, regardless of task instructions. His data also supports the idea that physical identity acts only by speeding encoding of a stimulus, since the same shape is encoded twice. Extending this to physically different pairs is straightforward; it will take longer to determine that codes for two items must be accessed if the letters are not particularly discriminable.

An alternate explanation of the case effect is that part of the physical identity checking involves determining if the letters are of the same case. If they are of different case then a Different response is made. If they are of the same case then further checking might be needed. On Same-Name Different trials, the name will conflict with the case information, leading to slow RTs.

The present experiment does not provide a means of

deciding between these alternate explanations of the case effect. A name-identity task might resolve the problem. If the case effect results from a relatively early discrimination which can only facilitate or retard later processing, and does not form the basis for response, then it should still be present on Different trials in a name identity task. If the case effect is part of a physical check after name processing is complete, then the case effect may not be present in a name identity task since checking for physical identity is unnecessary and may not occur.

Since Posner and Snyder's (1975a,b) criteria for deciding if conscious or automatic processes are employed were developed using a priming paradigm, it is difficult to apply them to the results for Different trials. However if Shiffrin and Schneider's (1977) criteria are used, it can be assumed that those processes which cause difficulties because they are inflexible and unavoidable are automatic. This would imply that name processing of targets on Different trials is automatic. From the Different response data alone, it is not possible to decide if the early physical processing probably responsible for the case effect is automatic.

Same response trials on a physical match task do not provide information directly about the codes accessed. Priming, while usually having little systematic effect on

Different trials, permits inferences about the prime and target codes accessed and about the automaticity of prime processing.

The reasons for the marked individual differences in name priming are crucial in deciding whether name processing is obligatory when matching under physical identity instructions. The presence of name priming indicates that both the prime and target are processed to a sufficiently high level for prime name to influence target processing. The absence of name priming does not allow an unambiguous interpretation. The three alternative explanations to be considered are that neither the prime nor target are name processed, that only the target pair does not undergo name processing, or that only the prime fails to be name processed. The first two alternatives both imply that individuals not showing name priming fail to process Same targets to name level. There are two lines of evidence which do not support this position. First, as discussed previously, name processing of Different targets does appear to occur for all individuals, including those not showing name priming. Secondly, if people not showing name priming were able to make physical Same decisions about targets prior to name processing, their Same response times should be faster than the corresponding response times for individuals showing name priming. This was not found; the trend was in the opposite direction.

It is difficult to assume that individuals not showing name priming were doing less processing for Same than for Different responses, and that they were processing Same responses differently from individuals showing name priming. Target processing in the Name Priming Absent and Name Priming Present groups differed primarily with respect to the facilitatory effects of name and physically related primes, and appear to be the result of differences in prime processing rather than target processing.

Prime processing differs from target processing in that no response is required. In particular, prime processing may be truncated by the presentation of the target. Since subjects were instructed to respond as quickly as possible to the target, they should have switched attention to the target rather than attempt to complete prime processing. This effect was evident for all individuals at the 25 msec SOA; no priming occured because prime processing was not sufficiently advanced to provide information useful to target processing. In addition, for the Name Priming Present Group, interrupting the initial processing of letter primes resulted in poorer performance than for plus primes, suggesting a time consuming switch from one processing activity to another. This is not intended to imply that prime processing requires attention; it may be completely automatic and continue during target processing. The point of the argument is that at the time the target processing is occurring, prime processing is not far enough advanced to

facilitate target processing.

It could be the case that some individuals need more than 300 msec to extract the name code for a letter, even though it may be automatic. At the SOAs employed in the present study, such people would never show name priming, even if the targets were always processed to name level prior to response. An alternate explanation is that the Name Priming Absent Group failed to initiate any prime processing. This explanation is weakened by the significant overall physical priming effect found for the Name Priming Absent Group (See Table 6). The cost found for Name and Unrelated primes at the 300 msec SOA argues against both of these explanations of the performance of the Name Priming Absent Group, however, the results are not readily explicable in other theoretical terms.

Hunt, Lunneborg, and Lewis (1975) compared RTs to physically identical items and name identical items on a name match task and found that the difference in RT on the two pair types was related to verbal ability. They followed the reasoning of Posner et al (1968) in assuming that the difference in RT reflected time to extract the name codes necessary for a name identity match. In addition, they hypothesized that the individual differences found reflected differences in the speed of the overlearned transformation from shape to name, rather than differences in qualitative aspects of the processes employed.

It is proposed that the individual differences in name priming are of similar origin. If name priming is automatic, and its absence is due to a lack of prime processing time, then a larger proportion of individuals should show name priming if SOAs longer than those used in the present study are employed. It might also be expected that evidence of name priming at short SOAs will be associated with high verbal abilities.

The argument that physical identity matches are made using name codes appears to be inconsistent with Hunt, Lenneborg, and Lewis' (1975) use of the physical match task as a baseline for comparison of high and low verbal groups on a name match task. However, examination of their data (Table 1, pg. 202) shows that the mean for low verbals on the physical matching task was 18 msec slower than the mean for high verbals, and the means on the name matching task differed by 44 msec, in the same direction. It could be assumed that the difference on the physical identity task reflect time differences in performance of a single shape-to-name transformation, while the larger difference on the name match task reflect time differences in the performance of two shape-to-name transformations.

The present experiment and other studies (e.g., Proctor, in press) provide evidence that matching in a physical identity task is often not performed on the basis of physical information. The presence of name priming, even

though not evident for all individuals, is particularly important, as it suggests that name codes are employed even on simultaneous physical same trials (cf. Proctor). Much of the support for the isolability hypothesis relies on the name vs physical interpretation of matching tasks. Any suggestion that name processing is involved in physical match tasks demands reinterpretation of the role of a physical code.

It has been proposed that physical information may affect encoding, or that physical information may be used to check the results of name decisions. Neither of these interpretations are consistent with an isolability hypothesis.

Demonstrating that name information can be used in an ostensibly physical task is not a conclusive refutation of isolability; it could be argued that the task or instructions were not appropriate for inducing physical processing. However, a demonstration of an interaction between name and physical information is more damaging to an isolability or independent code hypothesis than a failure to eliminate name processing. In the present experiment, results for almost all trial types indicated that both name and physical information affected response time.

Under some circumstances, name codes make no contribution; a child or person not familiar with letter names could only use a physical code in a letter matching

task. At some point in learning about letters the physical information no longer serves as the sole basis of response in a physical identity task. Since people generally look at letters with the intent of reading them, and since, in Shiffrin and Schneider's (1977) terminology, letter names are quite consistently mapped onto shapes, letter naming can become automatic. It is proposed that once letter naming has become automatic, activation of name codes will be unavoidable. If this is the case, when one code for a stimulus automatically activates another, they will not be isolable. The concept of isolability may be useful when considering codes that do not have an overlearned connection but it does not appear to apply to typical letter shapes and names.

Table 1

Experiment 1:

The Interaction of Prime Target SOA and Prime Type on Same Response Times

	SOA (in msec)				
Prime Type	25	75	300(2)	300(1)	Mean
Physical	564(a)	524(a)	512(a)	555(a)	539(a)
Name	562(a)	534(ab)	549(b)	572(b)	554(b)
Plus	554(a)	537(ab)	555(b)	587(c)	558(b)
Unrelated	562(a)	544(b)	575(c)	589(c)	568(c)

Note. Duncan's multiple range test; Means within a column which share a common letter designation do not differ at the .05 level of significance.

Table 2

Experiment 1:

The Effect of Prime Target SOA on Response Times

	SOA (in msec)			
Target Type	25	75	300(2)	300(1)
Same	560	535	548	576
Different	571	550	580	629
Same-Name Different	594	566	594	---

Table 3

Experiment 1:

The Effect of Target type on Different Response Times Averaged over SOAs for the Same-Name Different Group

Target Type		
Different Case Different Name	(+ Bd)	544(a)
Same Case Different Name	(+ BD)	564(b)
Different Case Same Name Primed	(b Bb)	582(c)
Different Case Same Name	(+ Bb)	588(c).

Note. Duncan's multiple range test; Means which share a common letter designation do not differ at the .05 level of significance.

Table 4

Experiment 2:

The Effect of Prime Type on Same Response Times

Prime Type		
Physical	(B BB)	423(a)
Name	(b BB)	457(b)
Plus	(+ BB)	469(c)
Unrelated Different Case	(d BB)	493(d)
Unrelated Same Case	(D BB)	506(d)

Note. Duncan's multiple range test; Means which share a common letter designation do not differ at the .05 level of significance.

Table 5

Reanalysis of Experiment 2:

The Interaction of Prime Type and Name Priming Group on Same Response Times

Prime Type		Name Priming Group	
		Absent	Present
Physical	(B BB)	480(a)	365(a)
Name	(b BB)	517(bc)	397(b)
Plus	(+ BB)	507(ab)	431(c)
Unrelated Different Case	(d BB)	512(b)	474(d)
Unrelated Same Case	(D BB)	542(c)	470(d)

Note. Duncan's multiple range test; Means within a column which share a common letter designation do not differ at the .05 level of significance.

Table 6

Reanalysis of Experiment 1:

The Interaction of Prime Type and Name Priming Group on Same Response Times Averaged over SOAs

	Name Priming Group	
Prime Type	Absent	Present
Physical	571(a)	506(a)
Name	588(b)	520(b)
Plus	582(b)	534(c)
Unrelated	591(b)	544(d)

Note. Duncan's multiple range test; Means within a column which share a common letter designation do not differ at the .05 level of significance.

Table 7

Reanalysis of Experiment 1:

The Interaction of SOA and Prime Type on Same Response Times in Name Priming Absent and Name Priming Present Groups

	SOA (in msec)			
Group	25	75	300(2)	300(1)
Name Priming Absent				
Prime Type				
Physical	577(a)	548(a)	554(a)	607(a)
Name	583(a)	553(a)	600(b)	616(a)
Plus	578(a)	555(a)	571(a)	624(a)
Unrelated	581(a)	557(a)	601(b)	625(a)
Name Priming Present				
Prime Type				
Physical	551(a)	501(a)	471(a)	503(a)
Name	541(ab)	515(ab)	498(b)	527(b)
Plus	529(b)	520(ab)	538(c)	550(c)
Unrelated	543(ab)	530(b)	549(c)	554(c)

Note. Duncan's multiple range test; Means within a column and group which share a common letter designation do not differ at the .05 level of significance. The underlined means are those on which Name Priming Group selection was based.

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Appendix A

Source Tables

1. EXPERIMENT 1

ANALYSIS OF SAME RESPONSE TIMES

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	157514609.8	1	157514609.8	1097.09	0.0000
G	S(G)	26292.1	1	26292.1	0.18	0.6718
T	TS(G)	116939.4	3	38980.0	6.73	0.0004
P	PS(G)	54689.9	3	18230.0	24.46	0.0000
S(G)		4307254.9	30	143580.0		
GT	TS(G)	5197.3	3	1732.4	0.30	0.8259
GP	PS(G)	2006.3	3	668.7	0.90	0.4458
TP	S(G)	42920.4	9	4768.9	6.14	0.0000
TS(G)		521089.2	90	5789.9		
PS(G)		67071.6	90	745.2		
GTP	TPS(G)	2203.2	9	244.8	0.32	0.9697
TPS(G)		209794.8	270	777.0		

Note.

G refers to groups receiving or not receiving Same-Name Different trials.

T refers to the four levels of SOA

P refers to the four prime types

S refers to subjects

2. EXPERIMENT 1

ANALYSIS OF ERROR RATES , SAME TRIALS

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	5733.9	1	5733.9	106.10	0.0000
G	S(G)	2.4	1	2.4	0.04	0.8348
T	TS(G)	73.1	3	24.4	1.63	0.1884
P	PS(G)	145.6	3	48.5	3.08	0.0313
S(G)		1621.3	30	54.0		
GT	TS(G)	43.2	3	14.4	0.96	0.4139
GP	PS(G)	32.1	3	10.7	0.68	0.5665
TP	TPS(G)	85.7	9	9.5	0.66	0.7478
TS(G)		1347.1	90	15.0		
PS(G)		1416.8	90	15.7		
GTP	TPS(G)	106.2	9	11.8	0.81	0.6036
TPS(G)		3913.2	270	14.5		

Note:

G refers to groups receiving or not receiving Same-Name Different trials.

T refers to the four levels of SOA

P refers to the four prime types

S refers to subjects

3. EXPERIMENT 1

ANALYSIS OF SAME RESPONSE TIMES, 300 MSEC BLOCKS

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	80765607.3	1	80765607.3	1058.91	0.0000
G	S(G)	18966.4	1	18966.4	0.25	0.6217
B	BS(G)	49770.8	1	49770.8	10.12	0.0034
P	PS(G)	82231.3	3	27410.0	23.78	0.0000
S(G)		2288182.6	30	76273.0		
GB	BS(G)	2720.3	1	2720.3	0.55	0.4629
GP	PS(G)	460.8	3	153.6	0.13	0.9400
BP	BPS(G)	7125.9	3	2375.3	3.06	0.0322
BS(G)		147572.5	30	4919.1		
PS(G)		103757.4	90	1152.9		
GBP	BPS(G)	179.3	3	59.8	0.08	0.9723
BPS(G)		69871.1	90	776.4		

Note.

G refers to groups receiving or not receiving Same-Name Different trials

B refers to the two 300 msec SOA blocks

P refers to the four prime types

S refers to subjects

4. EXPERIMENT 1

ANALYSIS OF DIFFERENT RESPONSE TIMES

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	260750000.0	1	260750000.0	884.34	0.0000
G	S(G)	21686.0	1	21686.0	0.07	0.7928
T	TS(G)	646980.0	3	215660.0	20.87	0.0000
C	CS(G)	117830.0	1	117830.0	42.01	0.0000
P	PS(G)	5755.5	2	2877.8	1.02	0.3676
S(G)		9264800.0	30	308830.0		
GT	TS(G)	20416.0	3	6805.4	0.66	0.5797
GC	CS(G)	210.4	1	210.4	0.08	0.7860
TC	TCS(G)	9843.0	3	3281.0	1.90	0.1352
GP	PS(G)	12129.0	2	6064.3	2.14	0.1260
TP	TPS(G)	34514.0	6	5752.3	2.37	0.0317
CP	CPS(G)	3298.9	2	1649.4	0.69	0.5068
TS(G)		930160.0	90	10335.0		
CS(G)		84149.0	30	2805.0		
PS(G)		169680.0	60	2828.1		
GTC	TCS(G)	3947.1	3	1315.7	0.76	0.5182
GTP	TPS(G)	24563.0	6	4093.8	1.68	0.1271
GCP	CPS(G)	823.9	2	412.0	.17	0.8427
TCP	TCPS(G)	31798.0	6	5299.7	1.63	0.1423
TCS(G)		155360.0	90	1726.3		
TPS(G)		437370.0	180	2429.9		
CPS(G)		143980.0	60	2399.7		
GTCP	TCPS(G)	8847.7	6	1474.6	0.45	0.8426
TCPS(G)		586680.0	180	3259.3		

Note.

G refers to groups receiving or not receiving

[redacted]me-Name Different trial

C refers to Same and Different Case Different trial types

T refers to the four levels of SOA

P refers to the three prime types

S refers to subjects

5. EXPERIMENT 1

ANALYSIS OF ERROR RATES, DIFFERENT TRIALS

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	4118.6	1	4118.6	41.6 1	0.0000
G	S(G)	27.3	1	27.3	0.28	0.6031
T	TS(G)	92.5	3	30.8	1.19	0.3176
C	CS(G)	551.3	1	551.3	18.60	0.0002
P	PS(G)	26.3	2	13.2	0.65	0.5275
S(G)		2969.6	30	99.0		
GT	TS(G)	54.5	3	18.2	0.70	0.5521
GC	CS(G)	153.6	1	153.6	5.18	0.0301
TC	TCS(G)	105.1	3	35.0	2.55	0.0608
GP	PS(G)	13.7	2	6.9	0.34	0.7152
TP	TPS(G)	179.5	6	29.9	1.3[illegible]	0.2483
CP	CPS(G)	52.9	2	26.4	1.23	0.2992
TS(G)		2329.5	90	25.9		
CS(G)		889.4	30	29.6		
PS(G)		1222.4	60	20.4		
GTC	TCS(G)	32.8	3	10.9	0.80	0.4994
GTP	TPS(G)	43.1	6	7.2	0.32	0.9268
GCP	CPS(G)	0.8	2	0.4	0.02	0.9810
TCP	TCPS(G)	173.4	6	28.9	1.58	0.1563
TCS(G)		1237.3	90	13.7		
TPS(G)		4064.7	180	22.6		
CPS(G)		1288.2	60	21.5		
GCTP	TCPS(G)	64.7	6	10.8	0.59	0.7396
TCPS(G)		3299.8	180	18.3		

Note.

G refers to groups receiving or not receiving Same-Name Different trials

C refers to Same and Different Case different trial types

T refers to the four levels of SOA

P refers to the three prime types

S refers to subjects

6. EXPERIMENT 1

ANALYSIS OF DIFFERENT RESPONSES, BLOCKS 1 AND 2

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(G)	140370000.0	1	140370000.0	792.84	0.0000
G	S(G)	3099.7	1	3099.7	0.02	0.8956
B	BS(G)	236660.0	1	236660.0	25.53	0.0000
C	CS(G)	97378.0	1	97378.0	34.66	0.0000
P	PS(G)	20487.0	2	10243.0	2.47	0.0935
S(G)		5311400.0	30	5311400.0		
GB	BS(G)	15088.0	1	15088.0	1.63	0.2119
GC	CS(G)	4.8	1	4.8	0.00	0.9673
BC	BCS(G)	223.6	1	223.6	0.08	0.7730
GP	SP(G)	14093.0	2	14093.0	1.70	0.1920
BP	BPS(G)	6076.9	2	3038.4	1.10	0.3406
CP	CPS(G)	21021.0	2	10510.0	2.42	0.0977
BS(G)		278130.0	30	9271.1		
CS(G)		84284.0	30	2809.5		
PS(G)		249250.0	60	4154.2		
GBC	BCS(G)	3450.0	1	3450.0	1.31	0.2619
GBP	BPS(G)	16313.0	2	8156.7	2.94	0.0603
GCP	CPS(G)	2362.7	2	1181.3	0.27	0.7629
BCP	BCPS(G)	6137.3	2	3068.6	0.60	0.5546
BCS(G)		79179.0	30	2639.3		
BPS(G)		166260.0	60	2771.0		
CPS(G)		260790.0	60	4346.5		
GBCP	BCPS(G)	2728.9	2	1364.4	0.26	0.7683
BCPS(G)		309240.0	60	5154.0		

Note.

G refers to groups receiving or not receiving Same-Name Different trials

C refers to Same and Different Case Different trial types

B refers to the first and second 300 msec SOA blocks

P refers to the three prime types

S refers to subjects

7. EXPERIMENT 1

ANALYSIS OF SAME-NAME DIFFERENT RESPONSE TIMES

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S	62278242.0	1	62278242.2	533.30	0.0000
T	TS	20803.0	2	10401.7	1.91	0.1652
S		1751699.0	15	116779.9		
C	CS	54795.0	3	18264.9	7.58	0.0003
TS		163093.0	30	5436.4		
TC	TCS	12236.0	6	2039.4	1.16	0.3338
CS		108430.0	45	2409.6		
TCS		157964.0	90	1755.2		

C refers to four types of Different trials, including Same-Name Different trials

T refers to the three levels of SOA

S refers to subjects

8. EXPERIMENT 2

ANALYSIS OF SAME RESPONSE TIMES

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S	17647099.0	1	17647099.0	145.25	0.0012
S		364473.0	3	121491.1		
B	BS	25723.0	3	8574.3	5.02	0.0258
P	PS	67931.0	4	16982.8	8.93	0.0014
BS		15382.0	9	1709.1		
PS		22822.0	12	1901.8		
BP	BPS	10630.0	12	885.9	1.03	0.4[illegible]9
BPS		30852.0	36	857.0		

Note.

B refers to the four blocks of trials

P refers to the five prime types

S refers to subjects

9. EXPERIMENT 2

ANALYSIS OF DIFFERENT RESPONSE TIMES

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S	24479875.1	1	24479875.1	205.84	0.0007
S		356777.2	3	118925.7		
B	BS	6777.9	3	2259.3	1.97	0.1895
C	CS	4558.2	1	4558.2	9.61	0.0533
P	PS	249.3	2	124.6	0.14	0.8738
BS		10335.3	9	1148.4		
CS		1423.4	3	474.5		
BC	BCS	1782.6	3	594.2	1.60	0.2561
PS		5419.7	6	903.3		
BP	BPS	8337.0	6	1389.5	4.36	0.0069
CP	CPS	669.7	2	334.8	0.54	0.6110
BCS		3335.8	9	370.6		
BPS		5741.7	18	319.0		
CPS		3752.3	6	625.4		
BCP	BCPS	6224.5	6	1037.4	1.88	0.1400
BCPS		9937.7	18	552.1		

Note.

C refers to Same and Different Case Different trial types

B refers to the four blocks of trials

P refers to the three prime types

S refers to subjects

10. EXPERIMENT 2

ANALYSIS OF SAME RESPONSES INCLUDING NAME PRIMING GROUP FACTOR

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(N)	17647098.8	1	17647098.8	158.59	0.0062
N	S(N)	141919.1	1	141919.1	1.28	0.3760
B	BS(N)	25722.8	3	8574.3	6.37	0.0271
P	PS(N)	67931.2	4	16982.8	29.89	0.0001
S(N)		222554.2	2	111277.1		
NB	BS(N)	7300.4	3	2433.5	1.81	[illegible]
NP	PS(N)	18276.5	4	4569.1	8.04	0.0066
BP	BPS(N)	10630.3	12	885.9	1.02	0.4656
BS(N)		8081.7	6	1347.0		
PS(N)		4545.2	8	568.2		
NBP	BPS(N)	9917.2	12	826.4	0.95	0.5200
BPS(N)		20935.2	24	872.3		

Note.

N refers to Name Priming Group

B refers to the four blocks of trials

P refers to the five prime types

S refers to subjects

11. EXPERIMENT 2

ANALYSIS OF DIFFERENT RTS, INCLUDING NAME PRIMING GROUP

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(N)	24479875.1	1	24479875.1	163.27	0.0061
N	S(N)	56915.7	1	56915.7	0.38	0.6006
B	BS(N)	6777.9	3	2259.3	1.79	0.2494
C	CS(N)	4558.2	1	4558.2	8.06	0.1049
P	PS(N)	249.3	2	124.6	0.19	0.8308
S(N)		299861.5	2	149930.8		
NB	BS(N)	2754.3	3	918.1	0.73	0.5723
NC	CS(N)	292.2	1	292.2	0.52	0.5469
BC	BCS(N)	1782.6	3	594.2	1.32	0.3510
NP	PS(N)	2853.2	2	1426.6	2.22	0.2242
BP	BPS(N)	8337.0	6	1389.5	8.72	0.0008
CP	CPS(N)	669.7	2	334.8	0.42	0.6805
BS(N)		7581.0	6	1263.5		
CS(N)		1131.1	2	565.6		
PS(N)		2566.5	4	641.6		
NBC	BCS(N)	643.5	3	214.5	0.48	0.7092
NBP	BPS(N)	3828.6	6	638.1	4.00	0.0196
NCP	CPS(N)	597.3	2	298.6	0.38	0.7070
BCP	BCPS(N)	6224.5	6	1037.4	1.50	0.2600
BCS(N)		2692.3	6	448.7		
BPS(N)		1913.2	12	159.4		
CPS(N)		3155.0	4	788.8		
NBCP	BCPS(N)	1614.5	6	269.1	0.39	0.8729
BCPS(N)		8323.2	12	693.6		

Note.

N refers to Name Priming Group

C refers to Same and Different Case Different trial types

B refers to the four blocks of trials

P refers to the three prime types

S refers to subjects

12. REANALYSIS OF EXPERIMENT 1

ANALYSIS OF SAME RESPONSES INCLUDING NAME PRIMING GROUP FACTOR

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(NG)	157514609.8	1	157514609.8	1140.14	0.0000
N	S(NG)	413708.8	1	413708.8	2.99	0.0946
G	S(NG)	26292.1	1	26292.1	0.19	0.6660
T	TS(NG)	116939.4	3	38980.0	7.82	0.0001
P	PS(NG)	54689.9	3	18230.0	29.13	0.0000
NG	S(NG)	25256.3	1	25256.3	0.18	0.6722
NT	TS(NG)	51380.3	3	17127.0	3.44	0.0205
GT	TS(NG)	5197.3	3	1732.4	0.35	0.7910
NP	PS(NG)	11960.2	3	3986.7	6.37	0.0006
GP	PS(NG)	2006.3	3	668.8	1.07	0.3668
TP	TPS(NG)	42920.4	9	4768.9	6.71	0.0000
S(NG)		3868289.8	28	138150.0		
NGT	TS(NG)	50977.2	3	16992.0	3.41	0.0212
NGP	PS(NG)	2550.7	3	850.2	1.36	0.2610
NTP	TPS(NG)	20316.4	9	2257.4	3.18	0.0012
GTP	TPS(NG)	2203.2	9	244.8	0.34	0.9592
TS(NG)		418731.7	84	4984.9		
PS(NG)		52560.8	84	625.7		
NGTP	TPS(NG)	10409.8	9	1156.6	1.63	0.1076
TPS(NG)		179068.6	252	710.6		

Note:

G refers to groups receiving or not receiving Same-Name Different trials

N refers to Name Priming Group

T refers to the four levels of SOA

P refers to the four prime types

S refers to subjects

13. REANALYSIS OF EXPERIMENT 1

ANALYSIS OF ERROR RATES, SAME TRIALS, INCLUDING NAME PRIMING GROUP FACTOR

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(NG)	5733.8	1	5733.8	100.59	0.0000
G	S(NG)	2.4	1	2.4	0.04	0.8391
N	S(NG)	15.3	1	15.3	0.27	0.6081
T	TS(NG)	73.1	3	24.4	1.64	0.1866
P	PS(NG)	145.6	3	48.5	3.01	0.0346
GN	S(NG)	10.0	1	10.0	0.17	0.6792
GT	TS(NG)	43.2	3	14.4	0.97	0.4114
NT	TS(NG)	16.3	3	5.4	0.37	0.7783
GP	PS(NG)	32.1	3	10.7	0.66	0.5762
NP	PS(NG)	44.9	3	15.0	0.93	0.4300
TP	TPS(NG)	85.7	9	9.5	0.68	0.7264
S(NG)		1596.0	28	57.0		
GNT	TS(NG)	81.3	3	27.1	1.82	0.1495
GNP	PS(NG)	18.5	3	6.2	0.38	0.7660
GTP	TPS(NG)	106.2	9	11.8	0.84	0.5766
NTP	TPS(NG)	81.1	9	9.0	0.64	0.7584
TS(NG)		1249.5	84	14.9		
PS(NG)		1353.3	84	16.1		
GNTP	TPS(NG)	307.4	9	34.2	2.44	0.0111
TPS(NG)		3524.6	252	14.0		

Note.

G refers to groups receiving or not receiving Same-Name Different trials

N refers to Name Priming Group

T refers to the four levels of SOA

P refers to the four prime types

S refers to subjects

14. REANALYSIS OF EXPERIMENT 1

ANALYSIS OF SAME-NAME DIFFERENT RESPONSE TIMES, INCLUDING NAME PRIMING GROUP FACTOR

SOURCE	ERROR	SUM SQUARES	DF	MEAN SQUARE	F	PROB
MEAN	S(N)	62278242.2	1	62278242.1	595.80	0.0000
T	TS(N)	20803.5	2	10401.7	1.82	0.1814
N	S(N)	288300.0	1	288300.0	2.76	0.1190
C	CS(N)	54794.7	3	18264.9	7.67	0.0003
S(N)		1463398.8	14	104528.5		
TN	TS(N)	2646.6	2	1323.3	0.23	0.7953
TC	TCS(N)	12236.4	6	2039.9	1.15	0.3399
NC	CS(N)	8390.1	3	2796.7	1.17	0.3310
TS(N)		160446.3	28	5730.2		
CS(N)		100040.1	42	2381.9		
TNC	TCS(N)	9252.5	6	1542.1	0.87	0.5198
TCS(N)		148711.7	84	1770.4		

Note.

N refers to Name Priming Group

C refers to four types of Different trials, including Same-Name Different trials

T refers to the three levels of SOA

S refers to subjects

Appendix B

Median Reponse Times by Subject and Condition

Mean Error Rates by Subject and Condition

1. Experiment 1, Median Same Response Times

Control Group, Name Priming Absent

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
1	0673.0	0654.0	0613.5	0612.0	0501.0	0553.0	0507.5	0555.0
2	0618.0	0612.5	0637.0	0621.5	0497.5	0564.5	0569.5	0576.0
3	0584.5	0607.0	0619.0	0607.0	0529.0	0589.0	0589.5	0609.0
4	0594.0	0597.0	0666.0	0647.5	0642.5	0635.0	0565.0	0599.0
5	0501.0	0569.5	0527.0	0531.5	0482.0	0477.0	0459.5	0518.0
6	0630.0	0618.0	0645.0	0662.0	0685.0	0709.5	0668.0	0743.0
7	0771.0	0734.5	0804.5	0803.0	0647.5	0696.5	0668.0	0667.0
8	0563.5	0560.0	0563.0	0617.0	0585.0	0618.0	0569.0	0635.5

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
1	0562.0	0588.5	0586.0	0524.0	0598.0	0606.0	0576.5	0628.0
2	0528.0	0475.5	0486.0	0565.0	0543.0	0581.0	0577.0	0538.0
3	0521.0	0549.0	0569.0	0533.0	0579.0	0550.0	0546.0	0566.0
4	0552.0	0496.5	0544.0	0538.0	0551.5	0558.0	0563.0	0572.0
5	0473.0	0468.0	0451.0	0455.0	0479.0	0527.0	0467.0	0488.0
6	0638.0	0606.5	0642.5	0681.0	0582.0	0590.5	0598.0	0632.5
7	0551.5	0545.0	0563.0	0583.5	0605.0	0617.5	0602.5	0595.5
8	0525.0	0561.0	0525.0	0530.0	0560.0	0575.0	0546.5	0558.0

1. Experiment 1, Median Same Response Times

Control Group, Name Priming Present

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
9	0462.0	0543.0	0507.0	0551.5	0462.0	0529.0	0554.5	0597.0
10	0692.0	0628.5	0689.0	0656.5	0565.5	0560.0	0594.5	0591.5
11	0413.5	0432.0	0486.0	0470.5	0380.5	0421.0	0453.0	0423.0
12	0717.0	0757.5	0772.0	0716.0	0692.0	0793.0	0836.5	0770.0
[illegible]	[illegible]6.0	0454.0	0492.0	0508.0	0368.5	0426.0	0462.0	0530.0
[illegible]	[illegible]82.0	0509.0	0550.0	0523.0	0489.0	0511.0	0601.5	0553.0
15	0403.0	0426.0	0433.0	0477.5	0401.5	0439.0	0483.0	0546.0
16	0458.0	0480.0	0462.0	0451.0	0440.5	0454.0	0470.5	0496.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
9	0506.0	0520.0	0508.5	0507.0	0560.5	0567.0	0537.0	0530.0
10	0532.5	0554.0	0575.0	0601.0	0630.5	0603.0	0632.5	0573.0
11	0457.0	0417.5	0425.0	0419.0	0507.0	0443.5	0466.5	0474.5
12	0868.0	0922.0	0965.0	0982.0	0958.0	0850.0	0774.5	0928.0
13	0441.0	0443.0	0438.0	0507.0	0485.0	0454.0	0439.5	0459.0
14	0543.0	0589.5	0523.0	0539.5	0551.0	0535.5	0513.5	0553.0
15	0427.0	0412.0	0434.5	0434.0	0472.5	0480.0	0466.0	0486.5
16	0433.0	0453.0	0491.0	0461.5	0505.0	0507.0	0496.5	0491.5

1. Experiment 1, Median Same Response Times

Same Name Different Group, Name Naming Absent

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
17	0801.5	0806.5	0724.0	0705.5	0615.0	0680.0	0684.5	0638.0
18	0529.0	0552.0	0570.5	0562.0	0448.0	0534.0	0540.0	0515.5
19	0479.0	0468.0	0515.5	0483.5	0408.0	0471.0	0448.0	0505.0
20	0614.0	0605.0	0652.5	0668.5	0511.0	0573.0	0564.0	0567.5
21	0783.0	0823.5	0808.0	0758.0	0786.0	0805.0	0746.5	0788.0
22	0438.0	0494.5	0495.0	0500.0	0453.5	0531.0	0499.5	0567.0
23	0523.0	0522.0	0529.0	0548.0	0485.0	0545.0	0500.5	0530.0
24	0603.5	0637.5	0610.0	0620.0	0578.0	0620.0	0556.0	0600.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
17	0611.5	0681.5	0693.5	0614.0	0644.5	0651.0	0641.0	0652.0
18	0543.0	0570.5	0526.0	0548.0	0584.0	0517.0	0580.0	0537.0
19	0466.5	0501.0	0478.0	0488.0	0513.0	0494.0	0542.0	0505.0
20	0539.0	0558.5	0522.0	0546.5	0602.0	0595.5	0576.0	0586.0
21	0708.5	0706.0	0746.5	0700.5	0778.0	0848.0	0855.0	0825.5
22	0470.0	0464.0	0483.0	0478.0	0504.0	0533.0	0488.5	0527.0
23	0469.5	0479.0	0483.0	0494.5	0482.5	0502.5	0497.5	0523.0
24	0606.0	0600.5	0576.0	0644.5	0619.5	0588.5	0591.0	0569.5

1. Experiment 1, Median Same Response Times

Same Name Different Group, Name Priming Present

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
25	0598.5	0599.5	0691.5	0664.5	0500.5	0521.0	0553.5	0531.5
26	0617.0	0684.0	0652.5	0683.0	0574.0	0514.0	0583.0	0679.0
27	0479.5	0472.5	0452.0	0478.0	0381.0	0418.0	0462.0	0481.0
28	0610.5	0587.5	0627.5	0661.5	0558.5	0557.5	0589.5	0555.5
29	0411.0	0436.0	0469.0	0515.5	0377.0	0437.0	0446.0	0528.0
30	0466.0	0487.0	0541.5	0542.0	0479.5	0471.0	0533.5	0473.0
31	0474.0	0542.0	0532.0	0493.0	0490.5	0486.0	0539.5	0546.0
32	0351.0	0388.5	0443.0	0467.0	0371.0	0437.0	0453.0	0477.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
25	0529.5	0503.0	0567.5	0556.0	0569.0	0593.5	0581.0	0602.0
26	0478.5	0534.0	0502.0	0510.0	0539.0	0544.0	0524.0	0536.0
27	0401.0	0449.0	0402.0	0452.5	0455.5	0455.0	0423.0	0468.5
28	0552.5	0591.0	0567.0	0599.0	0680.5	0675.0	0693.5	0700.0
29	0444.0	0457.0	0436.0	0429.0	0481.0	0470.0	0498.5	0488.0
30	0492.0	0461.0	0525.5	0506.0	0446.0	0518.0	0490.5	0495.0
31	0498.0	0513.0	0525.5	0536.0	0497.5	0508.0	0504.5	0479.0
32	0414.5	0414.5	0429.0	0445.5	0476.0	0448.5	0429.0	0428.0

2. Experiment 1, Percentage of Errors, Same Trials

Control Group, Name Priming Absent

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
1	03.3	10.0	00.0	00.0	03.3	03.3	10.0	05.0
2	03.3	00.0	00.0	00.0	06.7	06.7	00.0	00.0
3	06.7	03.3	10.0	05.0	03.3	03.3	00.0	05.0
4	03.3	03.3	15.0	00.0	06.7	06.7	00.0	05.0
5	00.0	00.0	00.0	00.0	00.0	03.3	10.0	00.0
6	00.0	03.3	15.0	05.0	06.7	00.0	05.0	05.0
7	00.0	00.0	00.0	05.0	00.0	00.0	00.0	05.0
8	00.0	03.3	05.0	05.0	00.0	00.0	10.0	00.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
1	10.0	00.0	00.0	10.0	03.3	03.3	00.0	05.0
2	00.0	06.7	05.0	05.0	03.3	16.7	00.0	00.0
3	06.7	20.0	05.0	05.0	03.3	10.0	05.0	10.0
4	10.0	06.7	05.0	10.0	06.7	03.3	05.0	00.0
5	03.3	03.3	00.0	05.0	03.3	03.3	05.0	05.0
6	03.3	00.0	00.0	00.0	00.0	00.0	20.0	00.0
7	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0
8	00.0	03.3	00.0	05.0	00.0	00.0	00.0	05.0

2. Experiment 1, Percentage of Errors, Same Trials

Control Group, Name Priming Present

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
9	03.3	06.7	05.0	00.0	03.3	16.7	00.0	05.0
10	00.0	06.7	05.0	00.0	00.0	06.7	00.0	00.0
11	00.0	00.0	00.0	00.0	00.0	00.0	05.0	05.0
12	06.7	00.0	00.0	10.0	03.3	06.7	00.0	00.0
13	00.0	06.7	00.0	05.0	06.7	00.0	15.0	20.0
14	03.3	03.3	00.0	10.0	03.3	00.0	00.0	05.0
15	00.0	03.3	00.0	10.0	00.0	03.3	00.0	10.0
16	00.0	03.3	00.0	00.0	00.0	03.3	00.0	00.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
9	03.3	10.0	10.0	15.0	00.0	03.3	05.0	05.0
10	00.0	00.0	00.0	00.0	00.0	03.3	00.0	00.0
11	13.3	00.0	05.0	05.0	00.0	06.7	00.0	00.0
12	00.0	00.0	05.0	00.0	00.0	00.0	00.0	00.0
13	03.3	00.0	15.0	05.0	03.3	00.0	00.0	10.0
14	06.7	00.0	10.0	00.0	03.3	00.0	00.0	00.0
15	00.0	03.3	00.0	00.0	00.0	00.0	00.0	00.0
16	03.3	03.3	05.0	00.0	03.3	03.3	00.0	10.0

2. Experiment 1, Percentage of Errors, Same Trials

Same Name Different Group, Name Priming Absent

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
17	00.0	00.0	00.0	10.0	00.0	00.0	00.0	00.0
18	03.3	06.7	00.0	00.0	03.3	16.7	10.0	10.0
19	10.0	06.7	00.0	10.0	13.3	06.7	15.0	05.0
20	00.0	03.3	00.0	00.0	03.3	03.3	00.0	00.0
21	03.3	13.3	05.0	05.0	06.7	03.3	10.0	05.0
22	03.3	00.0	00.0	05.0	00.0	03.3	00.0	05.0
23	00.0	00.0	00.0	05.0	00.0	03.3	00.0	05.0
24	00.0	00.0	05.0	00.0	00.0	03.3	05.0	10.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
17	00.0	00.0	00.0	10.0	00.0	03.3	05.0	00.0
18	10.0	13.3	05.0	05.0	03.3	10.0	10.0	05.0
19	00.0	03.3	10.0	05.0	03.3	06.7	00.0	10.0
20	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0
21	00.0	03.3	00.0	00.0	00.0	03.3	00.0	00.0
22	00.0	06.7	10.0	00.0	00.0	06.7	00.0	05.0
23	00.0	06.7	05.0	00.0	06.7	06.7	00.0	00.0
24	00.0	06.7	00.0	00.0	00.0	00.0	05.0	10.0

2. Experiment 1, Percentage of Errors, Same Trials

Same Name Different Group; Name Priming Present

	300(1) msec SOA				300(2) msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
25	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0
26	00.0	03.3	00.0	00.0	00.0	03.3	00.0	00.0
27	00.0	06.7	00.0	05.0	06.7	00.0	05.0	05.0
28	00.0	00.0	00.0	00.0	13.3	00.0	00.0	00.0
29	03.3	00.0	00.0	20.0	03.3	03.3	00.0	15.0
30	03.3	00.0	00.0	05.0	00.0	03.3	10.0	05.0
31	03.3	03.3	00.0	05.0	06.7	03.3	00.0	05.0
32	03.3	00.0	05.0	05.0	03.3	03.3	05.0	05.0

	75 msec SOA				25 msec SOA			
S#	PHYS	NAME	PLUS	UNRE	PHYS	NAME	PLUS	UNRE
25	00.0	00.0	00.0	05.0	00.0	06.7	00.0	00.0
26	00.0	06.7	00.0	05.0	06.7	10.0	00.0	05.0
27	03.3	03.3	00.0	10.0	00.0	10.0	00.0	00.0
28	00.0	00.0	00.0	00.0	00.0	00.0	10.0	00.0
29	03.3	00.0	05.0	05.0	00.0	06.7	00.0	00.0
30	10.0	10.0	00.0	10.0	03.3	03.3	10.0	05.0
31	03.3	06.7	00.0	05.0	06.7	03.3	10.0	05.0
32	13.3	13.3	05.0	00.0	03.3	13.3	10.0	05.0

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METAMORPHOSIS AND ORGANIC METAPHOR IN THREE OF EMERSON'S ESSAYS

by

© DAVID J. CLYBURN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF ENGLISH

EDMONTON, ALBERTA

SPRING 1981

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David J. Clyburn

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Edmonton, Alberta

November 20, 1980

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Metamorphosis and Organic Metaphor in Three of Emerson's Essays" submitted by David J. Clyburn in partial fulfilment of the requirements for the degree of Master of Arts.

.....
Supervisor

.....

.....

November 18, 1980

ABSTRACT

The primary aim of this thesis is to demonstrate that a shift occurs in Emerson's conception of poetic language. In Chapter One I argue that the correspondence theory in Nature (1836) implies the use of analogy and allegory as its most appropriate form of expression. Chapter Two shows that Emerson abandons the correspondence theory in favor of a new theory of poetic metaphor in "The Poet" (1844).

The shift in Emerson's poetic theory results from his reliance on the contradictory root metaphor of organicism. The correspondence theory in Nature relates to the ideal categories of the organic metaphor, whereas the new theory in "The Poet" is based on the progressive categories of the organic metaphor.

Chapter Three shows that Emerson's new theory of "the flowing or metamorphosis" is used as a bridge to reconcile the contradictory categories of the organic metaphor. In "The Poet" the ideal categories of organicism reassert themselves in an apparent attempt to develop an "ideal" aesthetic theory. But the idea of metamorphosis is used to make the two opposing theories less incompatible. Similarly, in the essay "Fate," (1870) fate is viewed from the perspective of both the progressive and ideal categories. Again, metamorphosis, the process by which the actual becomes the ideal, is used to reconcile the contradictory points of view.

EPIGRAPH

The rushing metamorphosis
Dissolving all that fixture is,
Melts things that be to things that seem,
And solid nature to a dream.

Woodnotes II

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INTRODUCTION

This thesis explores the role of metaphor in Emerson's thought. It shows that Emerson's conception of metaphor changes from an allegorical view in Nature (1836) to a theory of poetic metaphor in "The Poet" (1844) and "Poetry and Imagination" (1875). Emerson's changing conception of metaphor is related to what Stephen Pepper calls philosophical root metaphors or world hypotheses. The ideal and actual categories of the organic root metaphor are the poles of Emerson's thought; metaphor or metamorphosis is the bridge by which Emerson attempts to reconcile the contradictory categories of organic metaphor.

Recognition of a shift in Emerson's thinking about metaphor is not new. Sherman Paul, Vivian Hopkins, and R. A. Yoder, among others, have noted Emerson's abandonment of Swedenborg's static conception of symbolism for a more fluid approach. But to my knowledge the contradictory theories of metaphor in Nature have not received critical attention. Nor has there been any detailed study of the more general shift that occurs. R. A. Yoder points out, but only in passing, the contradiction between Emerson's early, static conception of symbolism and the fluid approach derived from the idea of metamorphosis. Vivian Hopkins, Sherman Paul, and Jonathan Bishop focus on Emerson's sources and his mature poetic theories, but they do not treat his theory of metaphor developmentally.

R. P. Adams' "Emerson and Organic Metaphor" is the only study of root metaphor theory as it applies to Emerson. I would like to believe that this thesis is an extension of his work. Daniel Shea's pertinent article "Emerson and the American Metamorphosis" appeared as this thesis was in progress. His analysis helped to confirm my own, and suggested ideas that I have developed in detail.

The first chapter begins with a clarification of terminology. This is necessary, first, because Emerson uses the terms "metaphor," "simile," "analogy," and "allegory" somewhat indiscriminately. Precise definitions are needed for these terms in order to demonstrate the change in Emerson's conception of metaphor. This survey of terminology also provides an opportunity to compare Emerson's theories of metaphor to current theories and to describe the various types of metaphors Emerson uses. The second chapter examines Emerson's new rhetorical theory of metaphor in detail and shows its relationship to the categories of organic root metaphor. The relationship between organic metaphor and Emerson's actual use of poetic metaphor in "The Poet" and "Fate" is the subject of the third chapter.

CHAPTER ONE: FIXED ANALOGIES.

Whereas Jonathan Bishop finds metaphor so central to Emerson's writing that he warns against reading Emerson exclusively as "the hero of metaphor,"[1] F. O. Matthiessen argues that although Emerson "talked about the unexampled resources of metaphor and symbol . . . his staple device was the analogy."[2] Other than through the laborious and probably futile method of counting analogies and metaphors, it would be difficult to prove who is correct. But their disagreement does point to the shift in Emerson's thinking. While in "The Poet" (1844) and "Poetry and Imagination" (1875) a theory of poetic metaphor is developed, the doctrine of correspondence in Nature (1836) implies the use of allegory and analogy.

Analogy is a scheme of logical proportion in which four terms are shown to be related. According to Aristotle, "the second (B) is related to the first (A), as the fourth (D) to the third (C). . . ."[3] For example, morning is related to day as birth is related to life.

While analogy compares four terms, allegory consists essentially of two terms. The first term of an allegory is stated; the second is an implied concept corresponding to the first. Northrop Frye says that allegory occurs

> . . . when a poet explicitly indicates the relationship of his images to examples and precepts, and so tries to indicate how a commentary on him should proceed. A writer is being allegorical whenever it is clear that he is saying "by this I also (allos) mean that." If this seems to be done continuously, we may say, cautiously, that what he is writing "is" an allegory.[4]

Both analogy and allegory point to a specific relationship between the terms involved. If I say that six is to twelve as five is to ten, I am not likely to be misunderstood. Similarly, according to Frye's definition, an allegory should clearly express the relationship between the two terms involved. In addition, the meaning of the relationship should be clear.

William Empson states in The Structure of Complex Words that "part of the function of an allegory is to make you feel that two levels of being correspond to one another in detail, and indeed that there is some underlying reality, something in the nature of things, which makes this happen."[5] His comment helps to bring out the distinction between allegory and symbolism. Whereas allegory compares "two levels of being" in "detail," the symbol as defined by Philip Wheelwright consists of one "relatively stable and repeatable element of perceptual experience, standing for some larger meaning or set of meanings."[6] Because of the detailed correspondential structure inherent in allegory, the two terms acquire precise meanings. The meaning of a literary symbol, by contrast, is apt to be far less exact.

As allegory is to symbolism, so symbolism is to metaphor. Wheelwright distinguishes symbol from metaphor "by its greater stability and permanence."[7] The meaning of the white whale to Captain Ahab is revealed at considerably greater length than the meaning of the relationship between sea and troubles in Shakespeare's metaphor, "sea of troubles."

Marcus Hester in The Meaning of Poetic Metaphor makes a distinction between what he calls implicit and explicit metaphors. Similes and analogies with their "grammatical red flags" of "like," "as," or "so" are explicit metaphors. An implicit metaphor, however, functions through what Empson calls the "trick of false identity"; it states that A is B.[8] According to Hester, "implicit metaphor is recognized by its literal falseness"; implicit metaphors "startle our literal language sense."[9] We recognize Emerson's statement "the air is music" to be metaphorical because of the false identity asserted between air and music.

Metaphor proper may be classed into five types: implicit or poetic metaphor, dead metaphor, mythical metaphor, archetypal metaphor, and philosophical root metaphor.

Hester differentiates between poetic and dead metaphor by the differences in the mental processes involved in their identification. He argues that dead metaphors are

"recognized," whereas poetic metaphors are understood through an "experience-act" of seeing as: "Seeing as is a technique; it requires imagination."[10] "Bottleneck" is a dead metaphor because a bottle neck is simply recognized as such and may be pointed to. But in the poetic metaphor "the air is music," the metaphor is understood through the experience-act of seeing as: "Seeing as is an intuitive experience-act by which one selects from the quasi-sensory mass of imagery one has on reading metaphor the relevant aspects of such imagery."[11] The "relevant aspects" are the similarities between the two terms or images of the metaphor, in this case "air" and "music." The images of the metaphor form what I. A. Richards has called the "vehicle" of the metaphor.[12] William Empson simplifies Richards' somewhat confusing account of tenor and vehicle by defining the tenor as the "thing meant" and the vehicle as the "thing said."[13]

Metaphorical seeing as is described as an intuitive process because

> seeing as is an irreducible, primitive accomplishment which either occurs or does not occur. . . . Seeing as is not reducible to a specific analysis. Nor is seeing as reducible to a specific set of procedural rules. There is no set of rules which will inevitably overcome aspect-blindness.[14]

Hester also differentiates between the act of seeing as and the result, i.e., our ability to explain the metaphor. The meaning of a poetic metaphor is first intuitively grasped,

then rationally explicated. Original use of metaphor is of special value because it creates new similarities. An original use of metaphor "defines similarity, not vice versa."[15]

Although Hester does not relate his analysis of seeing as to his discussion of mythical metaphor, mythical metaphor would seem to demand the type of recognition associated with dead metaphor. This is so because

> . . . the conscious tension of metaphor is not present in myth. Mythical statements are direct assertions in intent. As Morris argues, they are informative in purpose. Reinhold Niebuhr argues similarly that the essential difference between myth and poetry is that myth is poetry believed.[16]

Hester gives the following example of mythical metaphor from The Golden Bough: "We have carried away Death,/ And brought Life back./ He has taken up his quarters in the village,/ therefore sing joyous songs."[17] He points out that there is a "tension" between this statement and our literal knowledge. However, "when this myth was taken as myth, instead of aesthetically"[18] this tension would not have existed. For those who share the beliefs of the myth the statement is recognized to be true. Death has somehow left the village and Life has returned. "Life" appears to be used not as a figure of speech but as the name of an existing entity. Thus mythical metaphor is only metaphorical when it is not believed.

Between the classes of poetic and mythical metaphor is

a fourth type, which Frye and Wheelwright describe as "archetypal metaphor" or "archetypal symbolism." Wheelwright defines archetypal symbols as

> . . . those which carry the same or very similar meanings for a large portion, if not all, of mankind. It is a discoverable fact that certain symbols, such as sky father and earth mother, light, blood, up-down, the axis of a wheel, and others, recur again and again in cultures so remote from one another in space and time that there is no likelihood of any historical influence and causal connection among them.[19]

Archetypal metaphor may be distinguished from poetic metaphor in that it points to a relationship that is universally felt to hold. Shakespeare's metaphor "sea of troubles" is a poetic metaphor because it lacks this widespread meaning. We must be cautious in our categorizations, however, because as Frye points out, there is no "archetypal code book which has been memorized by all human societies."[20]

How does Emerson's theory of language in Nature relate to these types of metaphors? The theory of language that develops out of the correspondence theory implies such a rigid conception of archetypal metaphor that the theory of language suggests analogy and allegory as its most appropriate expression.

The doctrine of correspondence has many sources, but perhaps the best summary of its basic tenets is given by Jonathan Edwards in Images or Shadows of Divine Things:

> 59. If there be such an admirable analogy observed by the creatour in His works through the whole system of the natural world, so that one thing seems to be made in imitation of another, and especially the less perfect to be made in imitation of the more perfect, so that the less perfect is as it were a figure or image of the more perfect, so beasts are made in imitation of men, plants are [a] kind of types of animals, minerals are in many things in imitation of plants. Why is it not rational to suppose that the corporeal and visible world should be designedly made and constituted in analogy to the more spiritual, noble, and real world? It is certainly agreeable to what is apparently the method of God's working.[21]

Edwards states here that the physical world is an imitation of a spiritual or ideal world. Emerson extends this idea by suggesting that the physical world is in analogical correspondence with the human mind: "Every natural fact is a symbol of some spiritual fact. Every appearance in nature corresponds to some state of mind, and that state of mind can only be described by presenting that natural appearance as its picture" (W,I,26).[22] The correspondence between language and nature is thus seen to be rigid and particularized:

> 1. Words are signs of natural facts.
> 2. Particular natural facts are symbols of particular spiritual facts.
> 3. Nature is the symbol of spirit. (W,I,25)

Although Emerson uses the terms analogy, symbol, and metaphor interchangeably, it is apparent from the examples he provides that what he means here is best defined as allegory:

> An enraged man is a lion, a cunning man is a fox, a firm man is a rock, a learned man is a torch. A lamb is innocence; a snake is subtle spite; flowers express to us the delicate affections. (W,I,26)

The illustrations appear as metaphorical identity statements, but Emerson's dogmatic tone ("can only be described"), together with his particularized conception of correspondence, brings to mind Empson's definition of allegory as "two levels of being" that "correspond to one another in detail."[23] It should be observed that a theory of language based on allegory may still use analogy, symbol, and metaphor as a means of expression. Light and darkness may allegorically represent knowledge and ignorance, but this idea may be expressed through analogy, symbol, or metaphor. This is especially true of Emerson because he never systematized his allegorical framework as Spenser did, for example. As a literary artist Emerson used symbol, metaphor, and analogy; he did not write allegories.

Emerson's theory of language in Nature justifies Matthiessen's charge that he sought to deduce analogies or allegorical relationships that exist a priori.[24] But in the next chapter I will argue that this early theory is superseded by a more sophisticated theory in "The Poet". Indeed, other comments which Emerson makes in Nature already imply a new theory.

Emerson's idea of correspondence may be seen as a theory of archetypal metaphor in so far as his examples of

correspondence conform to what are recognized as universal archetypes. The mental process by which archetypal metaphor is recognized falls somewhere between the type of recognition associated with poetic and mythical metaphor. The metaphor is not believed, but it is somehow more than a false-identity statement.

Owen Barfield, a modern critic whose ideas are in substantial accord with Emerson's, argues that the similitudes revealed by archetypal metaphor are more than mere false-identities:

> Men do not invent these mysterious relations between separate external objects, and between objects and feelings or ideas, which it is the function of poetry to reveal. These relations exist independently not indeed of thought, but of any individual thinker : . . the language of primitive men reports them as direct perceptual experience. The speaker has observed a unity, and is not therefore himself conscious of a relation. But we, in the development of consciousness, have lost the power to see this as one. Our sophistication, like Odin's, has cost us an eye, and now it is the language of poets, in so far as they create true metaphors, which must restore this unity conceptually, after it has been lost from perception.[25]

In archetypal metaphor the relationship between tenor and vehicle is felt to be grounded in some real but mysterious relationship between nature and consciousness. In contrast to poetic metaphor, the identity statement is not absolutely false; it is believed to have some basis in reality. Barfield speaks of primitive man's perception of a "relation" which is for him a "unity." But for us this

unity has been lost to perception; it can be only conceptually regained. Thus what for primitive man was a mythical metaphor, with no tension between tenor and vehicle, may be for us an archetypal metaphor, if it is based on a universal symbol. In archetypal metaphor the relationship between tenor and vehicle is felt to be less "real" than in mythical metaphor, but more "real" than in poetic metaphor. This account of archetypal metaphor has much in common with Emerson's conception of analogical correspondence:

> It is easily seen that there is nothing lucky or capricious in these analogies, but that they are constant, and pervade nature. These are not the dreams of a few poets, here and there, but man is an analogist, and studies relations in all objects. He is placed in the center of beings, and a ray of relation passes from every other being to him. And neither can man be understood without these objects, nor these objects without man. All the facts in natural history taken by themselves have no value, but are barren, like a single sex. . . The motion of the earth, round its axis and round the sun, makes the day and year. There are certain amounts of brute light and heat. But is there no intent of an analogy between man's life and the seasons? (W,I,27-28)

Both Barfield and Emerson speak of a relation between man and nature, as between man's life and the seasons, for example. But Emerson does not confuse winter with Death, as primitive man confuses physical death with an entity named Death, as in the example from The Golden Bough.

Before outlining the differences between Emerson's ideas of correspondence and archetypal metaphor, I will

discuss the relationship between Emerson's idea of correspondence and his theory of language development. Both Barfield and Emerson are in accord with Hester's statement that the perception of primitive man does not clearly "distinguish between self and objects, words and their referents."[26] Because of this relationship between language and reality, the speech of primitive man is said by Emerson to be intensely metaphorical:

> Because of this radical correspondence between visible things and human thoughts, savages, who have only what is necessary, converse in figures. As we go back in history, language becomes more picturesque, until its infancy, when it is all poetry; or all spiritual facts are represented by natural symbols. (W,I,29)

Emerson's and Barfield's theories postulate a mysterious correspondential basis to account for the importance of mythical metaphor in the development of language. Contemporary scholarship has confirmed this view of the importance of metaphor in language development, and agrees that for primitive man, "the language of myth is apprehended as an immediate reality."[27]

Susanne Langer, following Philip Wegener, considers metaphor to be the most "vital" principle of language development. In Feeling and Form she notes the essential agreement between Barfield's theory of metaphor in Poetic Diction and the work of Ernst Cassirer:

> The fact is that this purely literary study reveals the same relationships between language and conception, conception and imagination, imagination and myth, myth and poetry, that Cassirer discovered as a result of his reflection on the logic of science.[28]

Her discussion of metaphor in the earlier Philosophy in a New Key is, however, somewhat more conventional. Metaphor is seen to function in a more logical and less magical way in the development of language, but its role is central. Metaphor is described as a process of "abstractive seeing" which is "the source of generality in language.[29] According to Langer:

> Where a precise word is lacking to designate the novelty which the speaker would point out, he resorts to the powers of logical analogy, and uses a word denoting something else that is a presentational symbol for the thing he means. . . .[30]

Like Emerson and Barfield, Langer believes that "all general words are probably derived from specific appellations by metaphorical use; so that our literal language is a very repository of 'faded metaphors.'"[31] As Emerson expresses it in "The Poet," "language is fossil poetry" (W,III,22).

Emerson's theory of analogical correspondence differs from Frye's and Wheelwright's conception of archetypal metaphor in two important respects. First, Emerson postulates an expressedly spiritual reason for the existence of archetypes: "Parts of speech are metaphors because the whole of nature is a metaphor of the human mind" (W,I,32).

Or again, "the world proceeds from the same spirit as the body of man. It is a remoter and inferior incarnation of God, a projection of God in the unconscious" (W,I,64-65). Second, although Emerson speaks of metaphor, the rigid scheme of correspondence implied by his theory points not to metaphor but to allegory. I will show, however, that in "The Poet" Emerson's theory of metaphor is in accord with Wheelwright's observation that even an archetypal symbol is not the vehicle of one constant meaning, but is capable of carrying many "tensive and paradoxical" meanings.[32]

Although Emerson's doctrine of correspondence is related to what modern critics describe as archetypal metaphor, his writing does contain a large number of mythical metaphors. Because of his religious beliefs many of the metaphors in his work are based on identity statements that he may believe but which the reader may not. Consider the following example from "The Poet":

> She [Nature] makes a man; and having brought him to ripe age, she will no longer run the risk of losing this wonder at a blow, but she detaches from him a new self, that the kind may be safe from accidents to which the individual is exposed. (W,III,23)

In this passage Nature is personified as an existing being, as Death was personified in the passage from The Golden Bough. While to the skeptical reader this may be so much figurative language couching a naive belief, to Emerson it may represent the literal truth.

Owen Barfield provides a means for interpreting this sort of passage by suggesting that for the writer, it is probably both literal and metaphorical at different times. He argues that there are two distinct principles of human consciousness, one for the creation of poetry, and another for its appreciation and evaluation:

> The poet, purely as creator, cannot even today be regarded as a self-conscious individual, for such consciousness is impossible without rational analytic thought. In so far as his own poetic activity comes within his knowledge and control, in so far as he can appreciate, and so correct, his own poetry, or choose what he will write, he is not maker, but comparer, or judge; and he cannot be both simultaneously.[33]

While I am not as certain as Barfield that this is true of all poets, I do think that it holds good for a writer such as Emerson. When in the mood of creation, Emerson may certainly believe in the meaning of his mythical metaphors. But as I argue in Chapter Two, this does not decrease his awareness of their potentially shocking effect on his audience. It is interesting that Barfield appeals to Emerson's account of the mutually exclusive "active" and "intellectual" powers to support his point: "The intellectual and the active powers seem to succeed each other, and the exclusive activity of the one generates the exclusive activity of the other. There is something unfriendly in each to the other" (W,I,22). Given Emerson's admission of his "unfriendly" critical eye, it is not unlikely that he recognized that his mythical metaphors

would be outrageous false-identities to many readers, and was ready to exploit their effects.

While mythical metaphors provide the basis of specific beliefs, philosophical root metaphor is said to provide a much more general foundation of belief. Stephen Pepper argues in World Hypotheses that all philosophical and religious systems can be traced back to root metaphors. According to Pepper a root metaphor that deals with knowledge in an unrestricted way is a "world hypothesis."[34] The four most common root metaphors or world hypotheses are "formism," "mechanism," "contextualism," and "organicism." Each demonstrates considerable adequacy with respect to accounting for the facts of experience, and, according to Pepper, "it is illegitimate to disparage the factual interpretation of one world hypothesis in terms of another--if both hypotheses are equally adequate."[35]

As R. P. Adams notes in "Emerson and Organic Metaphor," the root metaphors of organicism, and to a lesser extent those of "formism" and the "Heraclitean doctrine of the Flowing," play a central role in Emerson's thought.[36] Stephen Pepper describes organicism as

> . . . the world hypothesis that stresses the internal relatedness or coherence of things. It is impressed with the manner in which observations at first apparently unconnected turn out to be closely related, and with the fact that as knowledge progresses it becomes more systematized. . . . Finally, it conceives of all of these as contained in a total integration of existence or reality.[37]

Adams explains why Emerson is an organicist and at the same time characterizes the root metaphors of formism and mechanism:

> When I suggest that Emerson was an organicist, I mean that he did not habitually think of the universe as a copy of ideal reality or form, in the Platonic manner, or as a vast self regulating machine, in the manner of eighteenth century rationalists, but that he thought of it as if it were like a living plant or animal.[38]

Pepper argues that there is a contradiction inherent in the seven categories of the organic root metaphor. Categories one to four are the progressive categories, while categories four through seven are termed the ideal categories. Category four is pivotal, belonging to both sets. Here is his list of the categories:

> (1) fragments of experience which appear with (2) nexuses or connections or implications, which spontaneously lead as a result of the aggravation of (3) contradictions, gaps, oppositions, or counteractions to resolution in (4) an organic whole, which is found to have been (5) implicit in the fragments, and to (6) transcend the previous contradictions by means of a coherent totality, which (7) economizes, saves, preserves all the original fragments of experience without any loss.[39]

Briefly, the progressive categories are those of actual experience, in which knowledge develops, but in which contradiction and suffering occur. From the perspective of the ideal categories, however, contradiction and pain are illusory. Emerson's thought is based on these contradictory categories because, like so many Romantics, he attempted to

reconcile the actual and ideal poles of human experience. Chapter Two of this thesis will show the relationship between Emerson's conception and use of metaphor and the contradictory categories of organicism. Emerson's theory of correspondence in Nature relates to the ideal pole of organicism and to Platonic formism. The new rhetorical theory of metaphor hinted at in Nature and developed in "The Poet" and "Poetry and Imagination" is based largely on the progressive categories. Chapter Three will explore the belated return to formism that results from Emerson's attempt to develop an ideal theory of aesthetics in "The Poet." Finally, an analysis of the essay "Fate" (1860) will show the central role of the categories of organicism in Emerson's later work. Metaphor becomes, through the idea of metamorphosis, a means by which Emerson seeks to overcome the contradictions between the categories.

CHAPTER TWO: THE FLOWING OR METAMORPHOSIS

Although Emerson's theory of language in Nature is based on a rigid theory of correspondence, his conception of the rhetorical function of metaphor anticipates his later theory in "The Poet" and "Poetry and Imagination." I will argue that there is a contradiction between his conception of metaphor in the correspondence theory, and his conception of the rhetorical function of metaphor in Nature. This discrepancy results from his dual attitude toward nature and from a shift in emphasis from the ideal to the progressive categories of the contradictory root metaphor of organicism. The early correspondence theory relates to the static and ideal categories of organicism, while his later theory is grounded in its progressive categories.

The sources of the new theory of "the flowing or metamorphosis" will be discussed. I will show that Emerson abandons rigid Platonic formism for a more protean Neoplatonic variety. The imaginative process by which the poet "sees" metamorphosis, its translation into language, its effect on the reader, and its relationship to Emerson's theory of prose style will be the subsequent subjects of this chapter.

In Nature Emerson's conception of the rhetorical function of metaphor is related to the question of the

poet's role in society. This early essay states that part of the poet's vocation is to educate humanity in idealism. To understand this rhetorical function of metaphor, it is necessary to sketch briefly the general scheme of idealist philosophy and the cognitive theory derived from Coleridge that is associated with it.

In Chapter VII of Nature, "Spirit," Emerson mentions three questions that "are put by nature to mind: What is matter? Whence is it? and Whereto?" He answers:

> The first of these questions only, the ideal theory answers. Idealism saith: matter is phenomenon, not a substance. Idealism acquaints us with the total disparity between the evidence of our own being and the evidence of the world's being. The one is perfect; the other, incapable of any assurance; the mind is part of the nature of things; the world is divine dream. . . . (W,I,62)

The question of how nature is discovered to be "divine dream" is addressed in the previous section, "Idealism." Emerson contends that "to the senses and the unrenewed understanding, belongs a sort of instinctive belief in the absolute existence of nature." But, he continues, "the presence of Reason mars this faith" (W,I,49).

For Emerson, as for Coleridge, who in turn borrowed the term from Kant, Reason is an intuitive faculty allied to Imagination. Emerson invokes Reason and Imagination to challenge the tradition of empirical philosophy of Descartes, Locke, and Hume. Charles Feidelson, Jr.

describes the empirical theory against which Emerson rebelled:

> Empirical theory held that the given materials of knowledge are atomistic sensations, passively received and variously combined by the intellect, so that the fulness of subjective life becomes unreal, and, in Hume's words, the "creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience."[40]

Coleridge and Emerson did not deny the mind's "arrangement of atomistic sensations." They did, however, ascribe this process to a lower faculty of the mind, that of the Understanding. Coleridge describes the distinction between Reason and Understanding in the fifth essay of The Friend:

> Reason . . . [is] an organ bearing the same relation to spiritual objects, the Universal, the Eternal, and the Necessary, as the eye bears to material and contingent phaenomena. But then it must be added, that it is an organ identical with its appropriate objects. Thus God, the Soul, eternal Truth, &c. are the objects of Reason; but they are themselves reason. . . . in this sense [Reason] may be safely defined the organ of the Super-sensuous; even as the Understanding wherever it does not possess or use the Reason, as another and inward eye, may be defined the conception of the Sensuous, or the faculty by which we generalize and arrange the phaenomena of perception.[41]

As the eye sees material phenomena, so Reason is said to be an intuitive faculty which apprehends inner truth. Thus, for Emerson, Reason is a faculty which liberates man from the "despotism of the senses" and enables him to perceive the world as ideal, as the "apocalypse of the mind"

(W,I,48). Emerson argues "that the first effort of thought tends to relax this despotism of the senses which binds us to nature as if we were a part of it, and shows us nature aloof, and, as it were, afloat" (W,I,49). Reason and Imagination are related in that "the Imagination may be defined to be the use which Reason makes of the material world" (W,I,52). This imaginative perception is the means through which the poet perceives the symbolic relationships between the mind and nature:

> He converts the solid globe, the land, the sea, the sun, the animals into symbols of thought: he makes the outward creation subordinate and merely a convenient alphabet to express thoughts and emotions. This act or vision of the mind is called Imagination.[42]

The imagination is defined as a symbol making power. In the process through which a natural object becomes a symbol, matter is subordinated to mind, the external world is internalized, and the truth of Idealist philosophy is thought to be indicated. Emerson says that in the same way that a change in "our local position apprizes us of dualism," so too the poet in using objects as symbols makes them "not different from what we know them but only lifted from the ground and afloat before the eye" (W,I,50). Because it is the poet's role to further the idealist faith, the poet's rhetorical purpose is that of unsettling our belief in the absolute existence of the material world:

> He unfixes the land and the sea, makes them revolve around the axis of his primary thought, and disposes them anew. Possessed himself by a heroic passion, he uses matter as symbols of it. The sensual man conforms thoughts to things; the poet conforms things to his thoughts. (W,I,51-52)

Emerson's abandonment of the correspondence theory is already implicit here. If the poet "conforms things to his thoughts," things can no longer have simply the static, emblematic value they were said to have in Chapter IV, "Language." Emerson's new theory of flowing or metamorphosis begins to make itself evident as the passage continues:

> The one esteems nature as rooted and fast; the other as fluid, and impresses his being thereon. To him, the refractory world is ductile and flexible; he invests dust and stones with humanity, and makes them the words of Reason. (W,I,52)

While the theory of correspondence implies a stable relationship between physical forms and their symbolic meanings, this new view of nature as "fluid" suggests a radically new approach to the relationship between a natural form and its symbolic meaning. Just how different this new view is can be seen in Emerson's description of Shakespeare's use of language: "His imperial muse tosses the creation like a bauble from hand to hand, and uses it to embody any caprice of thought that is uppermost in his mind" (W,I,52). A wide gulf separates the idea of a natural form embodying "any caprice of thought" from the solemn

declaration made in "Language" that "there is nothing lucky or capricious in these analogies, but that they are constant, and pervade nature" (W,I,27).

Emerson himself was to some extent aware of a disharmony in his first book. In a letter written in August of 1836 he mentions a "crack" in Nature "not easily soldered or welded."[43] A previous letter from June of that year speaks of two works, a book entitled Nature and an essay entitled "Spirit."[44] This inconsistency results at least in part from Emerson's reliance on the contradictory root metaphor of organicism. In Nature Emerson's theories of metaphor rely on both the static, ideal and the progressive, actual categories of organicism. The correspondence theory relates to the ideal categories and to Platonic formism, whereas the later rhetorical theory is associated with the progressive categories, biological evolution, and the Plotinian doctrine of Reversion.

Before discussing these categories and how point of view is related to them in Nature, I wish to point out that I am attempting to schematize certain aspects of Emerson's thought. Such an enterprise is, to say the least, perilous. In addition, these ideas are conceptual. They apply to Emerson's thought, not to his biography. I will argue that when Emerson views nature from the ideal, it is its progressive categories that come into focus. I do not mean to imply that Emerson contemplates nature from such a lofty

perch. In actuality, it was Emerson's growing inability to maintain his transcendental faith that accounts for his shift to the progressive categories, to the world of "Experience."

In a larger sense, however, it is possible to view Emerson's career as an unsuccessful attempt to resolve the contradictions between the ideal and progressive categories of organicism. Stephen Pepper explains the opposition between these categories:

> The progressive categories involve time and change and finitude; yet time and change and finitude cannot be true, since only the absolute is true, and in the absolute is no time, nor change, nor finitude.[45]

The progressive categories are those in which fragments of experience gradually synthesize themselves into the organic whole of the ideal categories. Their opposition resides in the fact that if the organic whole is absolute, then it alone is real. But man's experience of life is fragmentary and limited. If we hold to the absolute, then "desire, frustration, all pain, and perhaps all pleasure" must be abandoned as illusory.[46] Emerson states the problem in "The Transcendentalist":

> The worst feature of this double consciousness is, that the two lives, of the understanding and of the soul, which we lead, really show very little relation to each other; never meet and measure each other: one prevails now all buzz and din; and the other prevails then, all infinitude and paradise; and, with the progress of life, the two discover no great disposition to reconcile

themselves. (W,I,353-54)

The gulf between appearance and reality remained an insoluble problem for Emerson, but it provides the subject matter of what may be most interesting in his work. As Daniel Shea observes, "Emerson's throwing his weight now on one horse; now another; his two boys, matter and spirit, jostling each other on the curbstone . . ." provide the "dramas of contradiction" and "language of dialectic" which "have illuminated Emerson's most challenging work."[47] Similarly, Stephen Whicher discovers this dichotomy in terms of his life as a whole:

> . . . there is a sense in which his view of life can properly be called tragic, in so far as his recognition of the limits of mortal condition meant a defeat of his first romance of self-union and greatness.[48]

The contradictions between the ideal and the actual are already inherent in the theories of language in Nature. The relationship between the contradictory theories of metaphor and the categories of organicism is complicated by the question of point of view. Kenneth Burke explains how point of view related to Emerson's dual attitude toward nature and to the conception of transcendence that the essay implies. Burke defines transcendence as the "building of a terministic bridge whereby one realm is transcended by being viewed in terms of a realm 'beyond' it."[49] He describes Emerson's conflicting attitudes toward nature in terms of this definition:

> Now that we have crossed the bridge, into the realm of "Reason" and "Spirit," Nature appropriately suffers what Emerson himself calls a "degrading." For whereas Nature rated high when thought of as leading towards the Supernatural, in comparison with the Supernatural it comes into question, even as regards its material existence.[50]

Emerson's conception of the epistemological function of metaphor in the correspondence theory relates to this "high" rating of nature. From the point of view of the actual, on the upward path of the progressive categories, nature reveals fixed analogies between mind and spirit:

> There seems to be a necessity in spirit to manifest itself in material forms; and day and night, river and storm, beast and bird, acid and alkali, preexist in necessary Ideas in the mind of God, and are what they are by virtue of preceding affections in the world of spirit. (W,I,34)

These analogies are grounded in the correspondence between the forms of nature and their "Divine Ideas." This correspondence of form suggests the static root metaphor of Platonic formism. The artist's goal is to intuit the Divine Idea which is reflected in the work of art. Conversely, nature rates high because the perception of natural forms leads to an intuition of the Ideas immanent in them. This is one of the "ends" or "uses" of nature. In addition, the perception of correspondential relationships provides moral instruction because "particular natural facts are symbols of particular spiritual facts," (W,I,20). From the point of view of the actual, progressive categories, Emerson looks to

the ideal. The static forms of the ideal are fused with the progressive categories, in the theory of correspondence.

But both nature and metaphor are seen differently when viewed from the other side of Burke's "terministic bridge" in the realm of spirit. It is only from the limited perspective of the actual that nature seems "rooted and fast," that the correspondence theory holds. When we view nature from the perspective of the ideal, nature is seen as fluid. It is mere appearance; yet it is in a state of evolutionary development toward Reality. From this perspective the poet's role is no longer to point out rigid correspondential relationships, but rhetorically to "unfix" nature.[51] The contrast between the earnest view of correspondence as moral allegory and the capricious poet noted earlier could not be more striking. It represents a shift in Emerson's thinking from a theory of rigid archetypal metaphor to a new theory of poetic metaphor.[52]

Another index of this shift is the change that occurs in the epigraph on the title page of Nature. The original 1836 edition begins with a quotation from Plotinus that characterizes nature as a fixed and remote projection of spirit: "Nature is but an image or imitation of wisdom, the last thing of the soul; nature being a thing which doth only do, but not know." The passage rates nature as "low," but implies a static correspondence between the mind and nature as "an image or imitation of wisdom." The epigraph that

accompanies the 1849 edition indicates Emerson's rejection of static correspondence in favor of a new metamorphic, evolutionary view:

> A subtle chain of countless rings
> The next unto the farthest brings;
> The eye reads omens where it goes,
> And speaks all languages the rose;
> And, striving to be man, the worm
> Mounts through all the spires of form. (W,I,1)[53]

The Plotinus epigraph notwithstanding, the reader may notice a certain paradox in terms of the categories of organicism. It is from the viewpoint of the progressive categories that nature rates "high" and is seen as corresponding with the ideal. But when the ideal is attained, nature is seen as fluid and the idea of correspondence collapses. Now it is the progressive categories that come into focus; nature is seen as evolutionary development, as "the flowing or metamorphosis."

This new conception of metamorphosis, appearing in the later sections of Nature, utterly contradicts the rigid scheme implied earlier:

> 'Nature is not fixed but fluid. Spirit alters, moulds, makes it. The immobility or bruteness of nature is the absence of spirit; to pure spirit it is fluid, it is volatile, it is obedient.' (W,I,76)

Nature is no longer seen as a static projection of spirit; indeed, Emerson apparently believes that spirit can progressively alter matter. This notion is taken to its

logical, if unlikely, conclusion in the final pages of Nature:

> A correspondent revolution in things will attend the influx of spirit. So fast will disagreeable appearances, swine, spiders, snakes, pests, mad-houses, prisons, enemies, vanish; they are temporary and shall be no more seen. (W,I,76)

In this early form metamorphosis is seen as an apocalyptic force that will literally transmute the progressive, actual into the ideal. Emerson's exuberance with his new metaphor may seem naive, but it will be developed into a somewhat more sensible theory in "The Poet" and "Poetry and Imagination." It remains now to trace first the sources, then the meaning of this new poetic theory.

Neoplatonic philosophy, Goethe's theory of plants, and evolutionary scientific hypotheses all provided background for Emerson's new metaphor.

The poet's "fluid" world is related to Plotinus' metaphor of Reality as "flowing." According to Plotinus creation flows or emanates from the One, which is symbolized as a sun or fountain. Below the One is the second hypostasis, nous, which is variously translated as Intelligence, The Intellectual Principle, and The Divine Mind. Comprised of Being, which is Intellect or Energy, it contains the archetypes or Ideal forms of the physical world. Flowing from nous is the World Soul or All-Soul, which in turn emanates the physical world.[54]

Metamorphosis corresponds not to the flowing or "Procession" of Reality from the One, but rather to epistrophe or "Reversion," the return of Intelligence to the One. R. T. Wallis explains:

> It is aspiration after this goal that motivates each level of Reality to revert in contemplation towards its source and thereby to attain the maximum unity possible for it.[55]

Metamorphosis in this Neoplatonic sense is the dynamic process whereby the progressive categories evolve into the organic whole of the ideal.

Plotinus' theory of ascension accorded with Goethe's theory of evolutionary biological development outlined in Versuch die Metamorphose der Pflanzen zu erklaren.[56] Ernst Cassirer stresses the importance of Goethe's insight that biological form is not static, but has temporal as well as physical dimension:

> Form belongs not only to space but to time as well, and it must assert itself in the temporal. This could not consist in merely static being, for any such condition of a life form would be tantamount to its extinction.[57]

As well as representing the process of becoming, rather than static being, Goethe's ur-plant was a symbol of the One and the Many. Daniel Shea contrasts Emerson's conception of the ur-plant with Lamarck's "monad of organic life" and notes the significance of metamorphosis as metaphor:

> While deriving from botanical study, the ur-plant strikes Emerson as a poetic hypothesis constantly being verified by impressions of unity arising out of multiplicity. Then, too, the monad is static. Goethe's ur-plant is defined in its changes of form, . . . Emerson had no mental itch to work out a philosophical consistency between the One and the Many, but as poet and rhetorician he badly needed a way of talking about two truths of perception at once. Metamorphosis, the observable process in nature by which something changes while maintaining its identity, was that way of talking.[58]

New scientific theories of evolution provided evidence for the metamorphosis of nature. Discussing form in nature, Stephen Whicher argues that in Nature "there was no implication that there was a metamorphosis among these forms," but that

> evolution almost literally dissolved this conception of nature. Both form and matter lost their final character and began to flow. At the heart of nature, where before he had seen a matter opposed to life, he now saw vitality and change.[59]

The threads of Neoplatonic philosophy, biology, and evolutionary science are woven into a common thread that presents evidence of a literal metamorphosis in nature. The contradictions inherent in the organic metaphor reappear again, however. Carl Strauch argues that Neoplatonic myth represents Emerson's faith, and evolution his skepticism. Strauch quotes from Emerson's Journals:

> "The question is," said Emerson a second time early in 1844, "whether the tilobites, or whether the gods, are our grandfathers; and whether the actual existing men are an amelioration or a degradation arises from the contingence whether we

> look from the material or from the poetic side" (J,VI,497).[60]

Neoplatonic myth postulates an ideal realm existing in eternity and a state of prior knowlege from which man has lapsed. Evolution represents the progressive categories, the process of becoming, the return to the One. The contradictions inherent in the theory of metamorphosis appear only in its historical and physical aspects, however. We now turn to its most important guise as a theory of perception and symbolism.

In its primary physical sense metamorphosis is the transformation of biological or physical form, nature as process and change, nature as becoming. In "The Poet" Emerson links this primary sense of the term with Plotinian Reversion in terms of a new theory of symbolism. The fusion of these concepts appears in Emerson's description of the poet's privileged perception of metamorphosis:

> As the eyes of Lyncaeus were said to see through the earth, so the poet turns the world to glass, and shows us all things in their right series and procession. For through that better perception he stands one step nearer to things, and sees the flowing or metamorphosis; perceives that thought is multiform; that within the form of every creature is a force impelling it to ascend into a higher form; and following with his eyes the life, uses the forms which express that life, and so his speech flows with the flowing of nature. (W,III,20-21)

The poet's "better perception" reveals the link between

biological development and spiritual ascension. The analogy that begins the passage is an extract from Plotinus' "On intelligible beauty" which Thomas Taylor quotes in his introduction to The Select Works of Plotinus, a book which Emerson knew well.[61] The Plotinian doctrine of Reversion is wedded to evolutionary ascension. The hint of poetic theory in the line "and following with his eyes the life, uses the forms which express that life, and so his speech flows with the flowing of nature" is developed as the passage continues:

> All the facts of the animal economy, sex, nutriment, gestation, birth, growth, are symbols of the passage of the world into the soul of man, to suffer there a change and reappear a new and higher fact. He uses forms according to the life, and not according to the form. (W,III,21)

Metamorphosis is the process by which a natural form is transformed by the poet's imagination into "a new and higher fact," a symbol or metaphor. Emerson's departure from the formistic correspondence theory is signalled by the last sentence. The poet's use of a natural form as metaphor is not determined by the form itself, but by "life," here meaning the poet's imagination.

Formistic theory is by no means abandoned though. In Plotinus Emerson discovered "a doctrine of forms" suited to the concept of metamorphosis, the explanation of which is one of the primary aims of "The Poet" essay.

The poet's "better perception" of metamorphosis is

related to Plotinus' conception of intuition. R. T. Wallis explains the relationship between intuition and Neoplatonic formism:

> . . . Intelligence (nous) is the level of intuition, where the laborious processes of discursive thought are bypassed and the mind attains a direct and instantaneous vision of truth . . . . the objects contemplated by Intelligence are the Platonic Forms themselves, Plato's Realm of True Being.[62]

But the Plotinian theory of beauty does not imply a static correspondence between ideal and actual form. Wallis states that Plotinus broke completely with traditional Platonism:

> For now it is not Form, but Life, in which Plotinus sees the essence of beauty . . . More radically still, he argues that even the beauty of the Forms would fail to stir us were they not quickened to life by the radiance cast upon them by the Good . . . In other words, it is with this radiance, 'the color blooming' on the Intelligible world (V.8.10.29-30), rather than with Form as such that true Beauty should be identified. Hence Plotinus goes so far as to declare that Primary Beauty is formless. . . .[63]

Emerson states that the poet's perception of metamorphosis enables him not only to see this primary beauty, but to participate in the ascension of spirit:

> Imagination, is a very high sort of seeing, which does not come by study, but by the intellect being where and what it sees; by sharing the path or circuit of things through forms, and so making them translucid to others. . . . The condition of true naming, on the poet's part is his resigning himself to the divine <u>aura</u> which breathes through forms, and accompanying that. (<u>W</u>,III,26)

As Vivian Hopkins implies, the word "seeing" is not used

literally. She states that this vision "exists not in his eye, but in his mind," because "perception, with Emerson, denotes not merely the reception of an object on the brain, but a realization by the mind of that object's significance."[64] Its significance is no longer single, however, for "all symbols are fluxional; all language is vehicular and transitive" (W,III,34).

Emerson's focus has shifted from the "form" of an object, whether ideal or actual, to the imaginative process "which breathes through forms." What this implies is that a natural "form" does not impose any single meaning. The "form" of the sea imposes a particular image or form on a painter if he is concerned with a realistic likeness. But the poet may use the word "sea" in almost any way he chooses to illuminate aspects of human life. "Sea" has numerous metaphorical attributes, only some of which apply to Shakespeare's metaphor "sea of troubles."

Emerson's break with rigid correspondential formism is now complete. His implied criticism of Swedenborg in "The Poet" helps to clarify his new theory:

> For all symbols are fluxional; all language is vehicular and transitive, and is good, as ferries and horses are, for conveyance, not as farms and houses are, for homestead. Mysticism consists in the mistake of an accidental and individual symbol for an universal one. (W,III,34)

This criticism is explicit in the essay on Swedenborg in Representative Men:

> The slippery Proteus is not so easily caught. In nature, each individual symbol plays innumerable parts. . . . The central identity enables any one symbol to express successively all the qualities and shades of real being. In the transmission of the heavenly waters, every hose fits every hydrant. (W,IV,121)

Emerson's tone in asking, "must I call the heaven and earth . . . an anthill or an old coat, in order to give you the shock of pleasure which the imagination loves?" (J,VI,18-19), suggests both a new rhetorical theory of metaphor and a liberated writing style.

David Porter argues in Emerson and Literary Change that Emerson's poetry was

> . . . narrow and predictable because of Emerson's persistent notion that the poetic idea stands prior to its language. This narrow idea of the craft enervated so much of Emerson's poetry because it took no account of the disorderly processes of mind in the act of discovery.[65]

The correspondence theory led to the impoverishment of Emerson's poetry because "it was an art based not on aesthetic needs, but on doctrine."[66] But in discussing "the eyes of Lyncaeus" passage previously quoted he discovers an argument for a new type of prose:

> Unrestricted form both releases and gives voice to the flowing figures of nature . . . Emerson's insistence on scope, motion, and unrestrained performance of imagination joins the fullness of life with the form of its perception and expression.[67]

The focus of the latter part of this chapter will be the

central role of metaphor or metamorphosis in the theoretical development of the new prose style which Porter describes. The bridge between Emerson's theory of poetic perception and his new literary method is discovered in a discussion of the mental process involved in reading a metaphor.

If, according to Emerson's reading of Plotinus, it is The Intuitive-Intellectual Principle in man that perceives the flowing or metamorphosis, it follows that this same faculty intuits the resemblances that form the basis of metaphorical equations. Metamorphosis is a two-way process. Just as natural fact is transmuted into metaphor, so metaphor transforms the world in the reader's mind:

> The metamorphosis of Nature shows itself in nothing more than this, that there is no word in our language that cannot become typical to us of nature by giving it emphasis. The world is a Dancer; it is a Rosary, it is a Torrent; . . . it is what you will; and the metaphor will hold, and it will give the imagination keen pleasure. Swifter than light the world converts itself into that thing you name. . . . (J,)

Here "the metamorphosis of Nature" is the imaginative act of grasping a metaphorical equation. The world is imaginatively transformed into the metaphorical vehicle.

Metaphor is no longer a vehicle of correspondential truth, but an intuition and expression of the unity behind the flux of experience:

> Or shall we say that the imagination exists by sharing the ethereal currents? The poet contemplates the central identity, sees it undulate and roll this way and that, with divine flowings, through remotest things; and, following it, can detect essential resemblances in natures never before compared. He can class them so audaciously because he is sensible of the sweep of the celestial stream, from which nothing is exempt. (W,VIII,21)

Emerson's claim is that the poet's perception of "the central identity" enables him to comprehend metaphorical resemblances in a privileged manner. The the ' suggests that the poet is distinguished by his use of fresh nd perhaps startling metaphorical equations. If the resemblances between natural forms, and between natural forms and ideas, offer proof of unity, then the metaphorical identity statements which reveal these resemblances must similarly point to unity. But the poet's metaphorical equations are termed "audacious." Although they point to an underlying unity, they are false-identity statements. Again, Emerson's new theory is of poetic metaphor, not archetypal metaphor.

In Nature the primary rhetorical function of metaphor is to "unfix" the material world. In "The Poet" and "Poetry and Imagination" its main function is to produce "a shock of agreeable surprise" by calling attention to the resemblances between diverse forms:

> The nature of things is flowing, a metamorphosis. The free spirit sympathizes not only with the actual form, but with the power or possible forms; but for obvious municipal or parietal uses God has given us a bias or rest on to-day's forms. Hence the shudder of joy with which in each clear moment we recognize the metamorphosis, because it is always a conquest, a surprise from the heart of things. (W,VIII,71)

The result of a fresh metaphorical equation is, according to Jonathan Bishop, "a true meaning in images." Bishop quotes from "Poetry and Imagination" to illustrate his meaning:

> A happy symbol is a sort of evidence that your thought is just. . . . If you agree with me, or if Locke or Montesquieu agree, I may yet be wrong; but if the elm-tree thinks the same thing, if running water, if burning coal, if crystals, if alkalies, in their several fashions say what I say, it must be true. (W,VII,13)

This sounds suspiciously like the correspondence theory again. As Bishop puts it: "If this means simply that Emerson can find natural images to support his ready-made doctrine, the sentence is relatively weak. . . ." But in his continuing commentary that leads to a quotation of the "shudder of joy" passage, he discovers a deeper meaning in metamorphosis:

> The "truth" about metaphor is unsayable except in the shape of another metaphor, another use of the world that includes elm trees and alkalies. A "happy symbol" is the only evidence that your thought <u>about symbols</u> is just. One understands the meaning of metaphor by seeing one, and then another and another.[68]

Metamorphosis is a perpetual discovery of new meanings through metaphor. The "shudder of joy" passage continues:

> One would say of the force in the works of Nature, all depends on the battery. If it give one shock, we shall get to the fish form, and stop; if two shocks, to the bird. . . . Power of generalizing differences men. The number of successive saltations the nimble thought can make, measures the difference between the highest and lowest of mankind. The habit of saliency, of not pausing but going on, is a sort of importation or domestication of the Divine effort in man. After the largest circle has been drawn, a larger circle can be drawn around it. (W,VIII,71-72)

The process of metaphoric discovery is described here metaphorically as "the habit of saliency." Michael Cowan shows (in a very long sentence) how in this passage:

> Emerson not only describes but demonstrates the "shock" of metamorphosis in his punning on "saliency," which causes an imaginative spark to jump, by means of the hinted root "sal" or salt, from the buried oceanic image ("flowing") in the first sentence and from the Latin root saliens and its meaning of "leaping" or "jumping" through the saline agent that carries a battery's current and finally to its most intellectual meaning of "striking" or "conspicuous"--which the pun itself certainly is.[69]

The creation of the work of art is only half of the metamorphic process. If the metamorphosis of nature is mirrored in the language of the poem, then its power is latent there. Its rhetorical significance is its re-creation in the reader's mind:

> If the imagination intoxicates the poet, it is not inactive in other men. The metamorphosis excites in the beholder an emotion of joy. The use of symbols has a certain power of emancipation and exhilaration for all men. . . . This is the effect on us of tropes, fables, oracles and all poetic forms. Poets are thus liberating gods. Men have really got a new sense, and found within

> their world another world, or nest of worlds; for the metamorphosis once seen, we divine that it does not stop. (W,III,30)

The exhilaration of intuiting the meaning of a new metaphorical relation releases us from habitual patterns of thought:

> Every thought is also a prison; every heaven is also a prison. Therefore we love the poet, the inventor, who in any form, . . . has yielded us a new thought. He unlocks our chains and admits us to a new scene. (W,III,33)

But even if the reader does not realize his confinement, Emerson's rhetorical theory suggests that he may be forcibly released. Although Emerson's emphasis is usually on the "happy symbol," Emerson's poet occasionally adopts an aggressive stance toward his less enlightened audience: "In proportion always to his possession of his thought is his defiance of his readers" (W,VIII,33).

The poet's role in "unfixing" the material world in Nature is paralleled in the theory of metamorphosis by Emerson's conviction that "thin or solid everything is in flight" (W,VIII,5). Nature as described in the first pages of "Poetry and Imagination" is radically volatile and metamorphic:

> First innuendoes, then broad hints, then smart taps are given, suggesting that nothing stands still in Nature but death; that the creation is on wheels, in transit, always passing into something else, streaming into something higher; that matter is not what it appears;--that chemistry can blow it all into gas. (W,VIII,4)

Emerson condescendingly describes the effect of this realization on "our little sir": "at this alarm everything is compromised; gunpowder is laid under every man's breakfast-table" (W,VIII,6). Poetry is similarly described as the chamber that generates "the explosive force . . . which sets in action the intellectual world" (W,VIII,64). This metaphor characterizes Emerson's rhetorical theory in its most experimental form. Metaphor provides a "shock" of surprise. But if the poet's "better perception" enables him to create "audacious" metaphors, why merely shock the reader when he can be blown out of his kitchen? As the infamous and unsuccessful "transparent eyeball" metaphor suggests, this tendency to catachresis was dangerous. The writer, perhaps more than the reader, was subject to the force of the explosion.

We have seen that the idea of metamorphosis is central to Emerson's conception of poetic creation and comprehension. But how does it relate to Emerson's "literary method," if indeed he has one, to Emerson as a writer of essays?

R. P. Adams, following F. O. Matthiessen, criticizes Emerson's essays for lacking organic unity. Adams notes the importance of the dichotomy between the progressive and the ideal categories of organicism in Emerson's thinking, and argues that the paradox disappears "in the image of the living tree," which exhibits both progressive development

and unity.[70] Emerson's best writing, Adams states, is developed in terms of this metaphor, rather than that of "the Heraclitean metaphor of the Flowing":

> Matthiessen's objection is valid, if it can be grounded on the doctrine that the dynamism of romantic thought, properly understood, is not a flowing but a growing; not a featureless flux but the development of an organic structure with a strong though not rigid inner logic and an unbounded but not incoherent shape.[71]

For better or worse, however, this was not what Emerson was after. The idea of metamorphosis was an attempt to fuse the metaphor of the flowing with radical organic growth. Emerson's rhetorical theory calls for a writing style that is characterized by a flow of metaphorical language with the aim of inspiring the reader:

> An imaginative book renders us much more service at first, by stimulating us through its tropes, than afterward when we arrive at the precise sense of the author. I think nothing is of any value in books excepting the transcendental and extraordinary. If a man is inflamed and carried away by his thought, to that degree that he forgets the authors and the public and heeds only this one dream which holds him like an insanity, let me read his paper, and you may have all the arguments and histories and criticism. (W,III,32)

We may note in passing that Emerson assumes "a precise sense" of meaning in the work. But in conjunction with his emphasis on the imaginative effect of tropes, there is a corresponding neglect of formal rhetorical structure and "organic unity":

> I think of a particular fact of singular beauty and interest. In thinking of it I am led to many more thoughts which show themselves, first partially, and afterwards more fully. But in the multitude of them I see no order. When I would present them to others they have no beginning. There is no method. (J,II,446)

He does not deny method altogether; he goes on to state that the thoughts will "take their own order" as "God's architecture." The metaphor is inappropriate, however, implying a structural pattern. Emerson's contemporary, Margaret Fuller, more correctly described his "natural manner" as a "stream of thought."[72] As Bishop argues, Emerson's writing embodies a continual recasting and transformation of his ideas:

> Emerson's literary method, at once his strategy and his fate, allowed him to repeat a single attempt at expression from one version to another through successive pages or volumes of his journals, or from journal to lecture to essay. . . .[73]

Because "the quality of the imagination is to flow and not to freeze," Emerson's theory focuses on the process of meaning in the work, rather than on the single image which with time "pales and dwindles before the revelation of the new hour" (W,II,305-306). Foregoing static symbolism and logical order, Emerson extols the poem that

> . . . shall thrill the world by the mere juxtaposition and interaction of lines and sentences that singly would have been of little worth and short date. Rightly is this art named Composition, and the composition has manifold the

> effect of the component parts. . . . the collated thoughts beget more, and the artificially combined individuals have in addition to their own a quite new collective power. The main is made up of many islands, the state of many men, the poem of many thoughts, each of which, in its turn, filled the whole sky of the poet, was day and Being to him. (J,III,478-79)

Emerson is not justifying the writing of bad poetry. Rather, his concern is that "the thought being spoken in a sentence becomes by mere detachment falsely emphatic" (J,VI,65). This passage reveals Emerson's utter faith in the root metaphor of organicism. Although each part is, singularly, unsatisfactory, the transcendent unity of the whole is assumed.

But if the unity is not "organic" in Adams' sense, does it exist at all? The unity may be found, ideally, in the metaphorical process itself. Martin Foss, a modern writer on metaphor, develops a theory which is strikingly similar to Emerson's.

Like Emerson, Foss believes that symbols are good for "conveyance," not "homestead." For Foss the value of the symbol lies in its expediency: "Complex and unfamiliar experiences are brought under old well-known concepts and images."[74] Metaphor, however, is described by Foss as a process of discovery in language:

> . . . it is not so much in the single word but in the process of speech itself, stretching over and beyond single words, in which the metaphorical move towards the extension of knowledge is to be found. Only in this process of speech can the

> metaphorical task be fully achieved, that is, to oppose the tendency of the word toward smooth and expedient fixation in familiar fences, and to draw it into the disturbing current of a problematic drive.[75]

Both Foss and Emerson believe that metaphor is uniquely capable of avoiding the rigid categorization of symbolic and abstract language. The use of metaphor provides a constantly changing center of meaning which challenges the reader to participate intuitively in the unfolding process of thought.

For Emerson, the individual metaphor is an expression of unity because it is based on resemblance and functions through the expression of an identity. The variety of individual metaphors, like the "interaction of lines," combines to create the unity of the work, a process of metamorphosis, its "new collective power." Foss explains the type of unity achieved:

> Metaphor is a process of tension and energy, manifested in the process of language, not in the single word. . . . The metaphorical sphere transcends the many and realizes a simple and invisible unity, although not the unity of a total and complete object or symbol or word. It is the unity of tension and process.

The organicist's faith is that "the known symbols . . . give birth to an entirely new knowledge beyond their fixed and addible multitude."[76]

Foss's comments help to explain how the essays exhibit the degree of unity they do. As Morse Peckham observes,

"the connection between almost any of [Emerson's] aphoristic sentences and the one that follows it is by no means easy to grasp." He argues that the job of the writer is "to give the reader at least the illusion, if nothing else, that sentence b really and truly follows from sentence a." Emerson, Peckham maintains, forgoes this task: "He does not build us bridges; he makes us leap."[77] The lack of formal structure in the essays resulting from Emerson's stress on the metaphorical process hinders the systematic presentation of ideas. But if the reader is forced to leap intuitively from trope to trope and from line to line he becomes involved in the process of metamorphosis that Emerson's writing seeks to explain and exemplify.

It remains now to examine Emerson's actual use of metaphor in two essays. I will not attempt to determine if Emerson's writing reflects the metaphorical process described above. A firmer basis for analysis is provided by the root metaphor theory. The first half of the third chapter will examine a cluster of metaphors associated with Emerson's central aim of developing an "ideal" aesthetic theory in "The Poet." The latter half of the chapter will demonstrate the importance of the two categories of organic root metaphor in the meaning and structure of the later essay "Fate."

CHAPTER THREE: ORGANIC METAPHOR IN "THE POET" AND FATE"

An analysis of Emerson's thought through root metaphor theory helps to clarify his meaning and intention in the essays "The Poet" and "Fate." In the previous chapter I argued that in "The Poet" Emerson develops a theory of metaphor by means of the progressive categories of organicism. But the essay also contains two passages in which the root metaphor of formism returns and is associated with the ideal categories in an apparent attempt to develop an ideal theory of poetry. If the passages are read literally, they seem to imply a return to a static doctrine of Platonic correspondence. As in Nature, there is a contradiction between the two poetic theories expressed through the two sets of categories. A close metaphorical reading of the passages, however, reveals that the idea of metamorphosis is used to reconcile the two theories. This reading also brings into focus associated clusters of metaphors that illustrate Emerson's use of poetic language to express poetic theory. In the essay "Fate," similarly, the categories of the organic metaphor provide two radically contrasting views of the essay's subject matter. Again, the idea of metamorphosis functions as a bridge to help reconcile the two opposing points of view.

The passages from "The Poet" pose certain difficulties. First, they seem to contradict the poetic theory developed elsewhere in the essay. Second, the ideal theory is not

explained in sufficient detail to allow for certitude in interpretation. Third, if the theory is taken literally, the reader may find it difficult to accept. The theory has received scant critical attention, perhaps for these reasons. I believe these passages are, however, of primary importance to one of Emerson's main intentions in the essay, to develop an ideal "doctrine of forms." In addition, they are associated with patterns of metaphors occurring throughout the essay that illustrate Emerson's use of metaphorical language to express poetic theory.

In the first paragraph of "The Poet" Emerson criticizes the state of aesthetic theory in America. The problem with contemporary criticism is its superficiality:

> It is a proof of the shallowness of the doctrine of beauty as it lies in the minds of our amateurs, that men seem to have lost the perception of the instant dependence of form upon soul. There is no doctrine of forms in our philosophy. (W,III,1)

Emerson's language and tone imply that he must develop a doctrine of forms if he is to avoid the superficiality he is criticizing. Additionally, the list of topics Emerson sets out at the end of the first paragraph are to be considered within the larger context of the need for an ideal aesthetic theory:

> And this hidden truth, that the fountains whence all this river of Time and its creatures floweth are intrinsically ideal and beautiful, draws us to the consideration of the nature and functions of the Poet, or the man of Beauty; to the means and materials he uses, and to the general aspect of the art in the present time. (W,III,4)

The doctrine of forms is given its first expression in the sixth paragraph. If the passage is read literally, and there is as yet no hint that it should not be, it states that actual poems are modeled after "ideal" poems that pre-exist in a state of being analogous to those of Plato's forms:

> For poetry was all written before time was, and whenever we are so finely organized that we can penetrate into that region where the air is music, we hear those primal warblings and attempt to write them down, but we lose ever and anon a word or a verse and substitute something of our own, and thus miswrite the poem. The men of more delicate ear write down these cadences more faithfully, and these transcripts, though imperfect, become the songs of the nations. (W,III,8)

Emerson, writing here from the perspective of the ideal categories, is at his least convincing. The notion that a poem pre-exists as a "primal warbling" may embarrass even his most sympathetic readers. But rather than dismissing the subject Emerson takes it up again in even greater detail in paragraph nineteen:

> The poet also resigns himself to his mood, and that thought which agitated him is expressed, but alter idem, in a manner totally new. The expression is organic, or the new type which things themselves take when liberated. As, in the sun, objects paint their images on the retina of the eye, so they, sharing the aspiration of the whole universe, tend to paint a far more delicate copy of their essence in his mind. Like the metamorphosis of things into higher organic forms is their change into melodies. Over everything stands its daemon or soul, and, as the form of the thing is reflected by the eye, so the soul of the thing is reflected by a melody. The sea, the mountain-ridge, Niagara, and every flower-bed, pre-exist, or super-exist, in pre-cantations,

> which sail like odors in the air, and when any man goes by with an ear sufficiently fine, he overhears them and endeavors to write down the notes without diluting or depraving them. And herein is the legitimation of criticism, in the mind's faith that the poems are a corrupt version of some text in nature with which they ought to be made to tally. (W,III,24-25)

In this expanded version it is not simply poems that pre-exist but the "precantations" of physical phenomena. The poet "hears" the melodies that objects give off, writes down the notes, and his poem thus corresponds with nature. If particular objects have particular souls that give off particular melodies, then the words for these objects should have a direct correspondence with the objects' souls and melodies. The implication is that if a poet could hear the notes exactly, an ideal poem could be written that would be in perfect correspondence with nature. Emerson does not state that particular forms have particular symbolic meanings, but he does imply specific correspondences between words and things.

Because there is no further clarification of this theory, it is difficult to know just what Emerson means by it.[78] But by positing a correspondential relationship between words and things, Emerson does seem to contradict the theory of poetic metaphor expressed elsewhere in the essay.

A metaphorical reading of the passage, however, suggests that Emerson uses the idea of metamorphosis to make

his ideal theory more consistent with the poetic theory developed through the progressive categories. There are three stages of metamorphosis. The first occurs in sense perception itself when "the soul of the thing is reflected by a melody." The second metamorphosis takes place when the "images" of sense perception are metamorphosed into the work of art. Finally, a third metamorphosis occurs in the mind of the audience when the work of art is appreciated. Because form is metamorphosed by mind, static formism and rigid correspondence are not implied. A metaphorical reading of these passages also helps to clarify Emerson's use of other metaphors related to visual perception in the essay.

The precantations and melodies of paragraph nineteen refer to what is more clearly a poetic metaphor in paragraph six, to that region where "the air is music." The importance of music as metaphor for Emerson has not gone unnoticed. Yoder argues that Emerson's conception of Orpheus was influenced by the work of Ralph Cudworth, a seventeenth century Neoplatonist. According to Yoder Orpheus meant to Emerson, "the very power of transformation and metamorphosis that we observe, perhaps in its purest form, in the changes of language and music."[79] William Scheick devotes a section of The Slender Human Word to what he calls the "governing hieroglyph" of Pan in "The Poet." Referring to the passages in question, Scheick suggests that the poet is like Pan "in that, as a result of his internal

harmony, he creates music. He penetrates the 'noise' of life to 'that region where the air is music,' where one hears 'primal warblings'."[80] Although neither Yoder nor Scheick develop the connection, I believe that a possible source for Emerson's imagery in both passages is Ralph Cudworth's True Intellectual System of the Universe. The metaphor in paragraph six suggests Cudworth's discussion of the musically ordered universe of the ancient mythologists:

> The ancient mythologists represented the nature of the universe by Pan playing on a pipe or harp, and being in love with the nymph echo; as if nature did, by a kind of silent melody, make all the parts of the universe everywhere dance in measure and proportion.[81]

The motifs of melody, the "reflection" or echo of sense perceptions, and love are associated with the first stage of metamorphosis.

Auditory metaphor, associated with the metamorphosis of sense perception, is developed in paragraph nineteen. In Emerson's first analogy ("As in the sun . . .") the poet's perception of "things themselves" is compared to visual perception but said to be more delicate. In the second analogy the transformation of reality into melody is compared to organic metamorphosis. The origin of these melodies is then described: "Over everything stands its daemon or soul, and as the form of the thing is reflected by the eye, so the soul of the thing is reflected by a melody."

Emerson's use of the word "reflected" is crucial here.

If "reflection" is merely passive, as the foregoing quotation from Cudworth suggests, (Pan is in love with the passive reflection of his own music) then Emerson's idea implies static correspondence. There would be a fixed relationship between the object, its soul, and its melody. For Cudworth "reflection," however, was not simply passive. According to Lydia Gysi, a modern commentator on Cudworth, the mind's "reflection" of an object is active:

> The object which the mirror [sense perception] passively reflected, and the eye [imagination] consciously perceived, reason comprehends again, not passively nor sympathetically, but in pure activity. . . .[82]

In relation to imagination and reason, reflection is active in that it is "a knowledge actively reproduced by the soul."[83] Sherman Paul provides confirmation; he argues that for Emerson perception was reciprocal: "The eye, in its own functions, focused the problem of his double consciousness of nature-as-sensation and nature-as-projection." Paul quotes a passage from Samson Reed's Growth of the Mind which he feels Emerson found true: "The eye . . . appears to be the point at which the united rays of the sun within and the sun without, converge to an expression of unity."[84]

Because perception is reciprocal, Emerson's doctrine of forms does not imply static correspondence. The reflection of an object by the mind is subject to the first stage of metamorphosis. When "the soul of the thing is reflected by a melody," that melody is being transformed by the creative

power of the mind. It is "like the metamorphosis of things into higher forms." The poet "shares the path or circuit of things through forms," by "resigning himself to the divine aura which breathes through forms, and accompanying that" (W,III,26). This process is not external to the poet; forms and melodies are in part a creation of his own consciousness. The focus is not on static formism, but on the mind's active role in sense perception.

Emerson develops the idea of the reciprocity of perception through a number of fascinating metaphors that seem to derive from the Democritean theory of perception. This theory was available to Emerson through both Cudworth and the Scottish realist philosopher, Dugald Stewart.[85] The analysis of this theory leads to a discussion of the second stage of metamorphosis.

There are at least two versions of the Democritean theory, and both seem to be related to Emerson's use of metaphor. One version is explained by Owen Barfield in his book History in English Words. Barfield explains how the meaning of the word "image," the root of "imagination," is related to Democritus' theory of perception: "He held that the surfaces of all objects are continuously throwing off 'images'-a kind of films or husks which float about in space and at last penetrate to the pores of the body."[86] A slightly different account is given by G. E. L. Lloyd in The Encyclopedia of Philosophy. Lloyd's version is more in

accord with the reciprocal nature of perception as explained by Samson Reed and Sherman Paul. Lloyd states that "images from both the object and the eye itself meet and imprint the air in front of the eye."[87]

Emerson's anecdote [illegible]pearance of the young poet is related to Barfield's [illegible]tion of the Democritean theory:

> How gladly we listened . . . We sat in the aurora of a sunrise which was to put out all the stars. . . . What! that wonderful spirit has not expired These stony monuments are still sparkling and animated! I had fancied that the oracles were all silent, and nature had spent her fires; and behold all night, from every pore, these fine auroras have been streaming. (W,III,10-11)

The poet is metaphorically equated with the sun-son and is surrounded by an emanation. But nature, too, is emitting auroras. The poet, in realizing his divinity, is surrounded by an aureole or halo, a symbol of lordship, in keeping with Emerson's conception of the poet as "emperor." But the auroras that stream from pores (not into them as in Barfield's account) radiate from nature as well. They seem to have inspired the poet; and the poet's emanation, in turn, seems to have cast reciprocally a new radiance on nature. These auroras are metaphorically equivalent to the melodies "which sail like odors in the air," to images, and to the divine aura "which breathes through forms."

This cluster of metaphors also helps to explain an important reference to images that Emerson quotes from the

Neoplatonist, Jamblichus, which illustrates the second stage of metamorphosis. Emerson states that nature "has insured the poet's fidelity to his office . . . by the beauty of things, which becomes a new and higher beauty when expressed. . . . 'Things more excellent than every image,' says Jamblichus, 'are expressed through images'" (W,III,13). There is an initial metamorphosis of "the soul of the thing" into a melody or "image." These images or perceptions of nature are then used as a type to create something greater still. They are subjected to a second metamorphosis by the poet's imagination. The auroras that streamed into the poet return forth "in a manner totally new," as the auroras or images of the the created work of art. As we saw in Chapter Two, these images inspire a third metamorphosis in the reader's mind when the created work is read.

One of Emerson's mythic metaphors in "The Poet" is associated with this pattern of metaphors. Emerson ascribes this passage to "a certain poet," Orpheus, using his "freer speech:"

> When the soul of the poet has come to ripeness of thought, she detaches and sends away from it poems or songs,--a fearless, sleepless, deathless progeny, which is not exposed to the accidents of the weary kingdom of time; a fearless, vivacious offspring, clad with wings (such is the virtue of the soul out of which they came) which carry them fast and far, and infix them irrevocably into the hearts of men. These wings are the beauty of the poet's soul. (W,III,23)

This passage suggests the second speech in Plato's Phaedrus in which Socrates describes the fourth type of divine

madness, the lover's. According to Plato's erotic fable:

> Wherefore she gazes upon the boy's beauty, she admits a flood of particles streaming therefrom--that is why we speak of a 'flood of passion'--. . . .[88]
>
> . . . that flowing stream which Zeus as the lover of Ganymede, called the 'flood of passion' pours in upon the lover. And part of it is absorbed within him, but when he can contain no more the rest flows away outside him, and as a breath of wind or an echo, rebounding from a smooth hard surface, goes back to its place of origin, even so the stream of beauty turns back and re-enters the eyes of the fair beloved. And so by the natural channel it reaches the soul and gives it fresh vigor, watering the roots of the wings and quickening them to growth. . . .[89]

This "flood of particles" is metaphorically equivalent to the Democritean images. They are used by both Plato and Emerson to symbolize the lover's or the poet's perception of beauty. Plato, like Emerson, speaks of the particles' "reflection" between the lovers: both conceive of perception as reciprocal. Beauty is the agent of this first metamorphosis; it causes the lover's and the poet's wings to grow. For Emerson, as previously noted, there is, however, a second metamorphosis. The images or melodies or "rays and appulses" are transformed again when the poem is created, for it too is "clad with wings." As F. O. Matthiessen reminds us, speaking from a different context, the ultimate source of this transforming power is said to be the divine mind: "We perceive how art is organic for [Emerson] in a double sense: not only is the appropriate growth out of the poet's intuition, but that intuition is in turn an

outwelling of the universal mind."[90]

Admittedly, the preceding passages are confusing. Emerson fuses formistic metaphor with the ideal aspects of organic metaphor and suggests the existence of an ideal realm of poetry. Why then attempt to read the passages metaphorically and deny that he is expressing a new theory of correspondence? First, the "metaphors" through which the theory is expressed are derived from both auditory and visual perception. It is not clear whether we are to believe literally in the melodies or in the images or in both. Second, Emerson insists on the metamorphosis of form, suggesting that he is not concerned with a static theory of correspondence. The language of Platonic formism, as R. P. Adams notes, "was likely to prove inappropriate . . . for what he wanted to say."[91]

The obscurity of these passages results in part from the persistence of formistic metaphor. Nevertheless, the network of metaphorical associations has its own fascination. Emerson, like Socrates in the second speech of Phaedrus, is speaking as a poet and not as a philosopher. A theory of poetry developed through poetic language may be, by turns, both transparent and opaque.

In the essay "Fate" Emerson is fully conscious of his use of the polarity of the organic metaphor. Indeed, Emerson's contradictory attitude toward fate (and the very structure of the essay) is the direct result of his thinking

in terms of the two sets of categories. Because "Fate" is representative of Emerson's later, more skeptical thought, its emphasis is on the recalcitrant aspects of the progressive categories of organicism. But because Emerson's rhetorical aim is to "build altars to the Beautiful Necessity" (W,VI,49), fate must ultimately be viewed under the aspect of the ideal categories, whereby its limiting influences are transcended. Again, the idea of metamorphosis is, to use Shea's phrase, a "problem solving device" which helps to reconcile the contradictory categories.[82]

Like his earlier attitude toward nature, Emerson's attitude toward fate is dual. As in "Experience," consciousness is a sliding scale and our perception of fate is relative to our point of view. The two poles of perception are those of the contradictory categories of organicism. Awareness of this duality is suggested as an answer to the problems fate poses:

> One key, one solution to the mysteries of human condition, one solution to the old knots of fate, freedom, and foreknowledge, exists; the propounding, namely, of the double consciousness. (W,VI,47)

The "double consciousness" is a solution because what is incomprehensible and tragic from the perspective of the actual, "whatever lames or paralyzes you," may be seen from the perspective of the ideal; it "draws in with it the divinity, in some form to repay" (W,VI,47-48).

Although Whicher correctly described as tragic the result of Emerson's inability to maintain the ideal pole of perception, Emerson necessarily makes light of the problem at the end of "Fate." The metaphorical language that describes these two aspects of experience provides insight into the rhetorical structure of the essay:

> A man must ride alternately on the horses of his private and his public nature, as the equestrians in the circus throw themselves nimbly from horse to horse, or plant one foot on the back of one and the other foot on the back of the other. (W,VI,47)

The essay is a precarious balancing act because Emerson intends to describe both the actual and ideal realms of experience. The bleak world of the actual is presented so acutely in the first pages that the reader may wonder if he can successfully shift his weight to the other horse. But the essay is a performance, and although there is the excitement of "ultimate values being tested," the high rhetoric of the end is really never in doubt.[83]

The essay has both a horizontal and a vertical structure. The horizontal structure shows the relationship of fate to "the leading topics which belong to our scheme of human life" (W,VI,4). These topics include matter, mind, morals, thought, character, science, and evolution. The essay has a vertical structure because fate is viewed from both the actual and ideal poles of experience: "Fate has its lord; limitation its limits,--is different seen from above

and from below, from within and from without" (W,VI,22). In this later work the terms of the dualism have shifted. Whereas in "The Poet" spirit and matter were juxtaposed, in "Fate":

> We have two things,--the circumstance, and the life. Once we thought positive power was all. Now we learn that negative power, or circumstance is half. Nature is the tyrannous circumstance, the thick skull, the sheathed snake, the ponderous rock-like jaw. . . . (W,VI,15)

Although the analogy is not mathematically exact, the structure of the essay may be compared roughly to an ascending line graph. Circumstance is at the bottom of the vertical axis, power is at the top, and the other topics are spread across the horizontal axis. The essay begins at its lowest point, matter viewed from the perspective of circumstance, and ends at its highest point, the ideal, organic whole viewed from the perspective of power.

The essay begins from the perspective of the progressive categories. When nature is viewed as circumstance, it is seen as savage predatory process:

> The habit of snake and spider, the snap of the tiger and other leapers and bloody jumpers, the crackle of the bones of his prey in the coil of the anaconda,--these are in the system, and our habits are like theirs. (W,VI,7)

Emerson's distance here from the mystical view of nature in the earlier essays cannot be overexaggerated. Unlimited ascension through all the "spires of form" is limited by the "iron hoop" of circumstance. Circumstance is the limiting

power of environment, and environment sharply restricts metamorphic possibility on both the biological and the human level. In biological terms, as Shea points out, "Goethe's archetypal leaf has been replaced by ovarian vesicles."[94] Environment, Emerson tells us, determines the vesicle's metamorphic potential, "A vesicle in new circumstances, a vesicle lodged in darkness, Oken thought, became an animal; in light, a plant" (W,VI,14). For Goethe metamorphosis had both progressive and regressive aspects. Shea explains Goethe's biological foundation for these polar forces:

> In the botanical terms used by Goethe, progressive metamorphosis takes place in successive stages from seed to fruit; regressive metamorphosis occurs when the form of the leaf contracts into the sexual organs of stamen and pistil and their protective petals and sepals. Apparently weakened by its retreat within the calyx, the plant is in fact undergoing a new creation. . . . What Goethe calls the steigerung, the heightening or ascension, can take place as only the result of interplay between these two movements, an aspiring and a contractive principle.[95]

In human terms this contractive principle or "negative power" includes not only environment, but limitations of all kinds: "Famine, typhus, frost, war, suicide and effete races must be reckoned calculable parts of the system of the world. . . . These are . . . hints of the terms by which our life is walled up" (W,VI,19). According to Shea the limiting powers of fate correspond to regressive metamorphosis and "call forth redoubled power" on the part of the individual to counteract them.[96] But regressive

metamorphosis works in a more sinister manner as well. Circumstance, like Circe, reduces man to the sensual and instinctual, metaphorically transforming him into an animal. A number of metaphors, particularly near the beginning of the essay, illustrate this regressive pull: "So he has but one future, and that is already predetermined in his lobes and described in that little fatty face, pig-eye, and squat form" (W,VI,11). A man's race, too, is the vehicle of this negative power which transforms him "into a selfish, huckstering, servile, dodging animal" (W,VI,35). Not only circumstance but detachment illustrates regressive metamorphosis: "'Detach colony from the race, and it deteriorates to the crab'" (W,VI,16). To state the matter another way, for Emerson, at the beginning of "Fate," man is an animal; it is only as he transforms himself into the human that he transcends the limitations of circumstance.

Fate may be transcended because in opposition to it is Power. Existence is described as the interplay between these two principles:

> For though Fate is immense, so is Power, which is the other fact in the dual world, immense. If Fate follows and limits Power, Power attends and antagonizes Fate. (W,VI,22)

As the essay rises from its dark beginning to fate as melioration, these dual forces balance each other through their mutual progressive development. Emerson recounts a Hindu myth of metamorphosis from animal to human form:

> In the Hindoo fables, Vishnu follows Maya through all her ascending changes, from insect and crawfish up to elephant; whatever form she took, he took the male form of that kind, until she became at last woman and goddess, and he a man and a god. (W,VI,20)

But at this early point in the essay, although "the limitations refine as the soul purifies," "the ring of necessity is always perched at the top" (W,VI,20).

Although formistic metaphor has disappeared from Emerson's thinking, at least in this essay, the old distinction between static and fluid still holds. Fate as natural history is personified as the creator of the "book of nature," rigid geological strata: "She turns the gigantic pages,--leaf after leaf,--never re-turning one. One leaf she lays down, a floor of granite; then a thousand ages, and a measure of coal" (W,VI,15). A similar geological metaphor describes hierarchical social orders, but the buried image of volcanic eruption makes explicit the metamorphic development of social change:

> The opinion of the million was the terror of the world, and it was attempted either to dissipate it, by amusing nations, or to pile it over with strata of society,--a layer of soldiers, over that a layer of lords, and a king on the top; with clamps and hoops of castles, garrisons, and police. But sometimes the religious principle would get in and burst the hoops and rive every mountain laid on top of it. (W,VI,34)

Fate is characteristically described through images of solidity: geological stata, iron bands or hoops, a wall, a rock-like jaw. But as Emerson begins to view fate in terms

of the ideal, this solid world dissolves.

From the perspective of the ideal, the world is necessarily in a perfect state of evolution. Emerson must now turn the hard and ugly facts of the actual, which he took pains to represent, into the necessary and beautiful. Despite his assertion at the beginning of the essay that it is of no use to metamorphose nature, "to dress up that terrific benefactor in a clean shirt and white neckcloth of a student of divinity" (W,VI,8), that is just what he must now do. The latter half of the essay (which begins, I think, with the quotation already cited on the interplay of Power and Fate) takes up three possible metamorphic agents: thought, the moral sentiment, and evolution. The language of metamorphosis is the "problem solving device," the acid by which recalcitrant fact is dissolved by these agents.

First, thought is metamorphic because "every solid in the universe is ready to become fluid on the approach of the mind" and "to a subtle force it will stream into new forms" (W,VI,43). Thought, as science and technology, effects a literal metamorphosis because it refashions the world to suit man's needs. Even the destructive forces in nature are harnessed and controlled: "The mischievous torrent is taught to dredge for man; the wild beasts he makes useful for food, . . . These are now the steeds on which he rides" (W,VI,33).

Also, it is thought which enables man to glimpse,

beyond the contradictions of the actual, the ideal, organic whole. From the perspective of the ideal, man learns that the actual is the necessary and best: "The day of days, . . . is that in which the inward eye opens to the unity in things; to the omnipresence of law:--sees that what is must be and ought to be, or is the best" (W,VI,25). This vision is progressively metamorphic because "all things are touched and changed by it," and "those who share it not are flocks and herds" (W,VI,26).

Second, the moral sentiment acts as an agent of change when it is allied with willpower causing "the whole energy of body and mind [to flow] in one direction" (W,VI,28). To the man of strong will, even regressive limitations induce progressive metamorphosis: "His science is to make weapons and wings of these passions and retarding forces" (W,VI,30). Emerson assures us, in language that pushes metamorphosis to its limit, that "when a god wishes to ride, any chip or pebble will bud and shoot out winged feet and serve as a horse" (W,VI,48).

Finally, evolution represents the literal metamorphosis of the actual into the ideal. "Fate involves the melioration" and "no statement of the Universe can have any soundness which does not admit its ascending effort" (W,VI,35). The mystical idea of Plotinian ascension has disappeared. What remains is a feeling that over eons of time there is gradual improvement:

> The first and worse races are dead. The second and imperfect races are dying out, or remain for the maturing of higher. In the latest race, in man, every generosity, every new perception, the love and praise he extorts from his fellows, are certificates of advance out of fate into freedom. (W,VI,36)

Having brought us, rhetorically at least, to the ideal, Emerson's optical trick is to view the actual as if it were the ideal. If we look closely at nature we see the shark's teeth. Emerson's solution, as in Nature, is to look through the other end of the telescope:

> The whole circle of animal life--tooth against tooth, devouring war, war for food, a yelp of pain and a grunt of triumph, until at last the whole menagerie, the whole chemical mass is mellowed and refined for higher use--pleases us at sufficient perspective. (W,VI,36)

From sufficient distance nature appears to be the organic whole, which it is in fact still in the process of becoming.

With the disappearance of the correspondence theory as a guarantor of the divine in nature, there is a new emphasis in the last pages of the essay on "correlation," "mutual fitness," and "adaptation." Emerson rediscovers a perfect harmony between the organism and its environment: "Eyes are found in light; ears in auricular air; feet on land; fins in water; wings in air; and each creature where it was meant to be, with a mutual fitness" (W,VI,37). Although there are a few hints of what Shea has called "the stink of self" in the last pages, "the slug sweats out its slimy house on the pear

leaf (W,VI,4)," nature as grim circumstance has been metamorphosed into nature as benevolent process.[97]

The hymns to the "Beautiful Necessity" which close the essay may be rhetorically weak:

> Let us build altars to the Beautiful Necessity, which secures that all is made of one piece; that plaintiff and defendant, friend and enemy, animal and planet, food and eater are of one kind. (W,VI,49)

But if we prefer the tougher language of the beginning of the essay, we should remember that Emerson's victory at the end is more than merely rhetorical. Emerson has kept his promise to give all the facts their due. "Nature and thought; two boys pushing each other on the curb-stone" (W,VI,43) have really jostled one another. And out of their stuggle Emerson creates a drama of sustaining interest, with metamorphosis as both a literal and metaphorical bridge between the actual and ideal.

CONCLUSION

The study of Emerson's writing by means of root metaphor theory does not supersede other means of analysis. Critics have long recognized the "polar" nature of Emerson's thought and have viewed it through many lenses. Spires of form, the twice bisected line, the angle of vision, and the Orphic poet, to mention only a few critical touchstones, have all provided foci for valuable studies of Emerson's speculations on the relationship between the One and the Many.

Nevertheless, Emerson's writing does seem well suited to interpretation through root metaphor theory. Emerson was always conscious of the contradictions between the ideal and the actual, and of his inability to solve them. Root metaphor theory suggests that because Emerson was an organicist, contradictions were endemic to his thought. By looking at his work in terms of organic metaphor, the contradictions and developments in his theories of metaphor become especially clear.

Nature is the first product of what Whicher has called Emerson's "transcendental egotism"; Emerson's passion for the ideal results in a theory of language implying a fixed doctrine of correspondence between the mind and nature. Allegory, not metaphor, is its most appropriate form of expression. But Emerson himself realized that there was a

"crack" in his first book, that his thoughts on nature and spirit may not have been in harmony. When nature is viewed from the perspective of spirit, nature dissolves and begins to flow. Together with the ideal, correspondential, and formistic view of language, there is the beginning of a new theory based on the progressive aspects of the organic metaphor.

With the development of the idea of metamorphosis, metaphor becomes, for Emerson, both a theory of perception and poetics. In "The Poet" and "Poetry and Imagination" the gulf between the actual and the ideal is bridged by the mind's intuition of the meaning of a metaphorical equation. But because of his emphasis on metaphorical process, the possibility of an internally cohesive organic form for the essay is sacrificed. The rhetorical aim of the writer is to create a flow of metaphorical language that will inspire the reader.

Emerson could not ignore either pole of experience, however. In "The Poet" the ideal categories of organicism and Platonic formism reassert themselves in an "ideal" aesthetic theory. The return of formism is perhaps unfortunate, but the idea of metamorphosis helps to make the two theories less incompatible.

For Emerson the polarity of organic metaphor meant two contrasting points of view from which any subject could be viewed. "Fate" illustrates one subject as seen from this

double perspective; it is both a regressive or "negative power" and a "Beautiful Necessity." Through the idea of metamorphosis Emerson attempts to resolve this paradox. Metamorphosis is the process by which the actual becomes the ideal.

NOTES

[1] Jonathan Bishop, Emerson on the Soul, (Cambridge: Harvard University Press, 1964), p. 119.

[2] F. O. Matthiessen, American Renaissance: Art and Expression in the Age of Emerson and Whitman, (New York: Oxford University Press, 1941), p. 65.

[3] Aristotle, The Works of Aristotle, ed. W. D. Ross, Vol. XI (Oxford: the Clarendon Press, 1924), p. 1457b.

[4] Northrop Frye, Anatomy of Criticism: Four Essays (New York: Atheneum, 1969), p. 90.

[5] William Empson, The Structure of Complex Words, (London, Chatto & Windus, 1964), p. 346.

[6] Philip Wheelwright, Metaphor & Reality, (Bloomington: Indiana University Press, 1962), p. 92.

[7] Wheelwright, p. 98.

[8] Empson, p .52.

[9] Marcus Hester, The Meaning of Poetic Metaphor: An Analysis in the Light of Wittgenstein's Claim that Meaning is Use, (The Hague: Mouton & Co., 1967), p. 26.

[10] Hester, p. 178.

[11] Hester, P. 180.

[12] I. A. Richards, The Philosophy of Rhetoric, (New York: Oxford University Press, 1936), pp. 96-97.

[13] Empson, p. 331.

[14] Hester, p. 181.

[15] Hester, p. 183.

[16] Hester, p. 27.

[17] Hester, p. 26.

[18] Hester, p. 27.

[19] Wheelwright, p. 111.

[20] Frye, p. 118.

[21] Jonathan Edwards, Images or Shadows of Divine Things, ed. Perry Miller, (New Haven: Yale University Press, 1948), p. 65. Sherman Paul notes that Emerson had

not read Edward's treatise. He cites Emerson's primary source for Swedenborgian correspondence as Samson Reed's Growth of the Mind.

[22] Ralph Waldo Emerson, The Complete Works of Ralph Waldo Emerson, ed., Edward Waldo Emerson, Centenary Edition, 12 vols. (Boston: Houghton Mifflin and Company, 1903), I, p. 25. All subsequent references are to this edition.

[23] Empson, p 346.

[24] Matthiessen, p. 65.

[25] Owen Barfield, Poetic Diction: A Study in Meaning, (London, Faber & Gwyer, 1928), pp. 86-87.

[26] Hester, p. 104.

[27] Hester, p. 104.

[28] Susanne Langer, Feeling and Form; A Theory of Art (New York: Charles Scribner's Sons, 1953), p. 237.

[29] Susanne Langer, Philosophy in a New Key, (Cambridge: Harvard University Press, 1942), p. 136.

[30] Langer, Philosophy, p. 139.

[31] Langer, Philosophy, p. 140.

[32] Wheelwright, p. 113.

[33] Barfield, p. 107.

[34] Stephen C. Pepper, World Hypotheses: A Study in Evidence, (Berkeley: University of California Press, 1966), p. 1.

[35] Pepper, p. 98.

[36] Richard P. Adams, "Emerson and Organic Metaphor," PMLA, 69 (1954), pp. 117-130.

[37] Pepper, The Basis of Criticism in the Arts, (Cambridge: Harvard University Press, 1945), p. 74.

[38] Adams, p. 118.

[39] Pepper, World Hypotheses, p. 283.

[40] Charles Feidelson, Jr., Symbolism and American Literature, (Chicago: The University of Chicago Press, 1953), p. 110.

[41] Samuel Taylor Coleridge, The Friend, Vol. IV:1 of The Collected Works of Samuel Taylor Coleridge, ed. Barbara E. Rooke (Princeton: Princeton University Press, 1969), pp. 155-56.

[42] Ralph Waldo Emerson, The Early Lectures of Ralph Waldo Emerson, ed. Stephen E. Whicher and Robert F. Spiller (Cambridge: Harvard University Press, 1959), I, p. 224.

[43] Ralph Waldo Emerson, The Letters of Ralph Waldo Emerson, ed. Ralph L. Rusk (New York: Columbia University Press, 1939), II, p. 32.

[44] Emerson, Letters, p. 26.

[45] Pepper, World Hypotheses, p. 314.

[46] Pepper, World Hypotheses, p. 314.

[47] Daniel B. Shea, "Emerson and the American Metamorphosis," in Emerson: Prophecy, Metamorphosis, and Influence, ed. David Levin (New York: Columbia University Press, 1975), p. 44.

[48] Stephen E. Whicher, Freedom and Fate: An Inner Life of Ralph Waldo Emerson, (Philadelphia: University of Pennsylvania Press, 1953), p. 109.

[49] Kenneth Burke, "I, Eye, Ay,--Emerson's Early Essay 'Nature': Thoughts on the Machinery of Transcendence," in Transcendentalism and Its Legacy, ed. Myron Simon and Thornton H. Parsons (Ann Arbor: The University of Michigan Press, 1966), p. 150.

[50] Burke, p. 160.

[51] R. P. Adams makes a similar point in "Emerson and Organic Metaphor." He notes that in Nature "[Emerson's] point of view . . . shifted uncomfortably and unpredictably between something like Platonic idealism and something like romantic organicism, doing justice to neither." With respect to language, Adams states that "the Swedenborgian correspondence, with its one to one ratio of idea and object, is not the same thing as the organic theory of functional and universal relationship." See Adams, pp. 121-22.

[52] In "Nature: Meek Ass or White Whale," Sage, 9 (Spring 1966), pp. 71-84, C. Q. Drummond develops an argument similar to Burke's. Drummond argues that at the beginning of Nature nature rates "high" but by the end of the essay it is "degraded." His essay makes interesting comparisons between Emerson's dual conception of nature and

Melville's Moby-Dick. The whale represents "the full awesome power of nature . . . [which] overwhelms the contempt for nature in the person of Ahab." Ahab himself, Drummond suggests, is "a kind of intensified Emerson."

[53] For a complete description of the revisions made in Nature see Emerson's Nature: Origin, Growth, and Meaning, ed. Merton M. Sealts, Jr. and Alfred R. Ferguson (Toronto: Dodd, Mead, & Company, 1969), pp. 68-71.

[54] My discussion of Plotinus is based on that of R. T. Wallis in Neo-Platonism.

[55] R. T. Wallis, Neo-Platonism, (London: Duckworth, 1972), pp. 87-88.

[56] According to Daniel Shea Emerson referred to this prose treatise. It is not to be confused with Goethe's poem "The Metamorphosis of Plants."

[57] Ernst Cassirer, The Problem of Knowledge: Philosophy, Science, and History since Hegel, trans. W. H. Woglom and C. W. Hendel (New Haven: University Press, 1950), p. 139.

[58] Shea, pp. 39-40.

[59] Whicher, p. 144.

[60] Carl F. Strauch, "Emerson's Sacred Science," PMLA 73 (Jan. 1958), p. 239. The quote from the Journals is from The Journals of Ralph Waldo Emerson, ed., Edward Waldo. Emerson and Waldo Emerson Forbes, Riverside Edition, 12 vols. (Cambridge: The Riverside Press, 1909). All subsequent references are to this edition.

[61] John S. Harrison's The Teachers of Emerson provides an account of Emerson's use of Taylor's translations of Plotinus.

[62] Wallis, p. 53.

[63] Wallis, p. 87.

[64] Vivian C. Hopkins, Spires of Form: A Study of Emerson's Aesthetic Theory, (Cambridge, Harvard University Press, 1951), p. 36.

[65] David Porter, Emerson and Literary Change, (Cambridge: Harvard University Press, 1978), p. 28.

[66] Porter, p. 13.

[67] Porter, pp. 179-80.

[68] Bishop, pp. 125-26.

[69] Michael E. Cowan, "The Loving Process: Metamorphosis in Emerson's Poetry," in Characteristics of Emerson, Transcendental Poet: A Symposium ed. Carl F. Strauch (Hartford: Transcendental Books, 1975), p. 13.

[70] Adams, p. 124.

[71] Adams, p. 126.

[72] This comment is quoted by Sherman Paul in Emerson's Angle of Vision, p. 116.

[73] Bishop, p. 107.

[74] Martin Foss, Symbol and Metaphor in Human Experience, (Lincoln: University of Nebraska Press, 1949), p. 57.

[75] Foss, p. 59.

[76] Foss, p. 61.

[77] Morse Peckham, "Emerson's Prose," in Ralph Waldo Emerson, New Appraisals: A Symposium ed. Leonard Neufeldt (Hartford: Transcendental Books, 1973), p. 66.

[78] Vivian Hopkins suggests this doctrine is derived from Plotinus' doctrine of reminiscence. Reminisicence, she argues, is "a power of the soul, which always possesses certain innate conceptions." According to Vivian Hopkins "the theory of reminiscence appears in 'The Poet,'" in "the statement that a sensitive poet can hear from such natural objects as mountains, ocean, and flowers, 'overtones' from a kind of preexistence, audible only to a keen ear." See Spires of Form, pp. 29-30.

[79] R. A. Yoder, Emerson and the Orphic Poet in America, (Berkeley: University of California Press, 1978), p. 3.

[80] William Scheick, The Slender Human Word: Emerson's Artistry in Prose, (Knoxville: The University of Tennessee Press, 1978), p. 109.

[81] Ralph Cudworth, The True Intellectual System of the Universe, (New York: Gould & Newman, 1837), I, p. 225.

[82] Lydia Gysi, Platonism and Cartesianism in The Philosophy of Ralph Cudworth, (Berne: Verlag Hebert Lang, 1962), p. 30.

[83] Gysi, p. 25.

[84] Paul, p. 73.

[85] Stephen Whicher quotes a passage from Stewart outlining this theory in Freedom and Fate, pp. 176-177.

[86] Owen Barfield, History in English Words, (London: Methuen & Co., 1926), p. 101.

[87] G. E. L. Owen, "Leucippus and Democritus," The Encyclopedia of Philosophy, 4, p. 449.

[88] Plato, The Collected Dialogues of Plato Including the Letters, ed., Edith Hamilton and Huntington Cairns Bollingen Series, 71 (Princeton University Press, 1961), pp. 497-98.

[89] Plato, p. 501.

[90] Matthiessen, p. 135.

[91] Higgins, p. 124.

[92] Shea, p. 41.

[93] Shea, p. 47.

[94] Shea, p. 47.

[95] Shea, p. 45.

[96] Shea, p. 47.

[97] Shea, p. 43.

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