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We kindly express our gratitude to Ms. Athena Bertino for her help in the production of this year's journal.

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DEVELOPMENTAL RELATIONSHIPS OF COGNITIVE AND MORAL REASONING

Dana L. Zeidler

ABSTRACT

Measurements of formal reasoning and principled moral reasoning were obtained from a sample of 99 tenth grade students. Specific modes of formal reasoning (proportional reasoning, controlling variables, probabilistic, correlational and combinatorial reasoning) were first examined. Findings support the notion of hierarchical relationships which exist among those variables. Further results from factor analysis provide evidence that the variables represent specific cognitive structures that are interdependent with each other and precede operations in development. Finally, significant relationships were found to exist between the different modes of formal reasoning and principled moral reasoning. Combinatorial and correlational reasoning were found to significantly account for 22 percent of the variance in principled moral reasoning. Theoretical and educational implications were discussed.

INTRODUCTION AND PURPOSE

The central role of cognitive development and its relationship to other areas of life span development have captured and held the interest of researchers and educators particularly over the last decade (Tomlinson-Keasey and Keasey 1974; Kohlberg, 1976; Kuhn et. al. 1977; Karplus et. al. 1980). In terms of moral development, a general correspondence between cognitive operations and moral stage level has clearly been developed. Cognitive development is understood to be a necessary but not sufficient condition for moral development. Moral development occurs along a parallel path in juxtaposition with, but theoretically distinct from cognitive development (Kohlberg and DeVries 1969; Tomlinson-Keasey and Keasey 1974; Colby and Kohlberg 1975; Kuhn et. al. 1977).

Much of the past developmental research, however, had been burdened with assessment instruments or tasks which were relatively novel and subsequently restrictive in terms of their generalization because of a lack of reliability information. Kuhn et. al. (1977) noted that much of the empirically observed variability in many of the assessment techniques used to assess cognitive and moral operations was due to unreliability in the instruments used to tap those constructs:

As we learn more about the exact nature of cognitive operations involved in each of the stage sequences and develop more precise means of assessing these operations, it may turn out that the developments which occur in each of the domains (cognitive and moral) are in fact more closely related than our present data indicate (p. 179).

Tomlinson-Keasey (1974) also studied the mediating role of cognitive operations on moral reasoning and suggested evidence for the centrality of logical operations. But again, because of the restrictive assessment techniques they were limited to observing relationships between the two domains at the operatory level. Tomlinson-Keasey and Keasey did have the foresight to suggest the possibility that:

...an ability acquired during formal operations, such as the consideration of all the possibilities, would help a child to think of answers other than conventional ones when faced with a moral dilemma (p. 297, 1974).

Fortunately, the tenacity of educational researchers has led to the refinement of instruments which have undergone substantial validity and reliability construction. Most notably, Tobin and Capie (1980a, 1980b, 1981) have extended the work of Lawson (1978) and Lawson et. al. (1979) to develop an objective group test of logical reasoning ability. The instrument is called the Test of Logical Thinking (TOLT) and is a measure of five different modes of formal reasoning: proportional reasoning, the ability to control variables, probabilistic reasoning, correlational reasoning and combinational reasoning. Advances have also been made in the realm of moral stage assessment. Rest (1976, 1979) has constructed an objective measure of moral reasoning called the Defining Issues Test (DIT) which is consistent with Kohlberg's stage theory of moral development and yields a value for the percentage of post-conventional (principled) moral reasoning employed by subjects.

The implications of the advances made in recent test development open up numerous possibilities for researchers to investigate. For example, some researchers (Inhelder and Piaget, 1958; Adi et. al. 1978) have theorized that proportional and probabilistic reasoning are prerequisites of correlational reasoning. McKenzie and Padilla (1982) tested this proposed hierarchy using TOLT, but their results were inconclusive. However, their sample consisted of subjects ranging from grades six through twelve, with over 60% of them in grades six through eight. It might be the case that such a wide range of developmental differences with many subjects in transitional stages masked the effects of the proposed hierarchy.

Therefore, one aim of the present study was to replicate a part of McKenzie and Padilla's (1982) study, using subjects from one grade level (tenth grade). There is evidence which suggests that individuals have the ability to use their formal reasoning skills somewhat more consistently at the tenth grade level than earlier grades in which students are apt to be transitional (Karplus et. al. 1980). Another implication of the TOLT is that it provides one with the opportunity to investigate with some degree of confidence specific features of cognitive thought. The second aim of the present study was to formulate evidence from the results of the TOLT which support the existence of singular cognitive structures which together construct more encompassing operations. The third aim of the present study was to more precisely document the relationship between formal operations and postconventional reasoning. While it has been revealed that individuals express a range of principled moral reasoning, depending on the context of the moral problem and the experiences that a person has had with the content embedded in a problem (Iozzi 1976; Zeidler & Schafer 1984), the role of specific formal reasoning skills on principled moral reasoning has yet to be examined. Identifying specific cognitive structures which appear to influence moral reasoning would be of instrumental value to educators in narrowing the decalage that exists between the two domains.

METHOD

SUBJECTS

The subjects were selected from a sample of tenth grade biology students from a high school located in a middle to upper-middle class suburban community of Delaware. Of the 99 students from which complete information was obtained, 43 were male and 56 were female. There were 71 white students and 28 black students in the sample. The mean age of the entire sample was 15.6 years.

TESTS

Test of Logical Thinking

The Test of Logical Thinking (TOLT) was developed by Tobin and Capie (1980a, 1980b, 1981) for the purpose of assessing formal reasoning skills in an objective, group test format. Questions included on the TOLT represent items that have been demonstrated to tap formal operations (Lawson, 1978, Lawson et. al. 1979) and be consistent with the research on cognitive development by Inhelder and Piaget (1958, 1975). The test consists of ten items which measure five different modes of formal reasoning ability; proportional reasoning, controlling variables, probalistic reasoning, correlational reasoning, and combinatorial reasoning. The TOLT requires individuals to solve problems in each of the above areas, select a correct response, and choose the best explanation for their response. Tobin and Capie (1981) report criterion-related validity of the TOLT with performance on interviews assessing the same logical reasoning skills as a .80 correlation. The authors also report highly significant predictive validity ($p=.0001$) of the TOLT with several measures of achievement and intellectual development (e.g.: Integrated Process Skills, SAT, Paper Folding and Surface Development Tests). A one factor solution of individual items on the TOLT provided support for construct validity. Reliability as measured by Cronback's alpha for internal consistency was found to be .85 ($n=682$).

Defining Issues Test

The Defining Issues Test (DIT) is a measure of moral reasoning on general social problems. The test consists of stories which present social dilemmas. Each dilemma is accompanied by issue statements which reflect different levels of moral judgment. The subjects rank these statements according to perceived importance. The test is considered to be objective and consistent with Kohlberg's stage theory of moral development (Rest, 1976; 1979). Rest reports highly significant criterion group validity with 50% of the variance in test scores attributed to group differentiation. He also found significant ($p=.0001$) longitudinal change validity in both cohort and time-sequential designs. Convergent-divergent validity, validation of internal structure and validation through experimental enhancement studies have also been well established and published elsewhere (Rest 1979, 1979a). Davidson and Robbins (1978) report test-retest reliability of .80 and Cronback's alpha (internal consistency) index in the upper .70's.

PROCEDURE

Consent was obtained from all potential subjects, and instructions concerning the directions of each test were given to the subjects prior to the day of testing. Consequently, the subjects had ample time during the course of their

class period to complete one instrument. Subjects were arranged at opposite ends of lab tables (a procedure they were familiar with during normal class testing) and remained quiet for the duration of the period. Subjects responded to the DIT on the first test date, and then to the TOLT two days later. Listwise deletion was employed on subsequent data analyses so that computations were derived from the same set of data. Complete information was obtained from 99 students.

RESULTS AND DISCUSSION

PATTERNS OF HIERARCHY IN FORMAL REASONING

To test the proposed theoretical cognitive hierarchy (proportional and probabilistic reasoning are necessary determinants of correlational reasoning) reviewed above, subject's response patterns were analyzed in a manner that was consistent with McKenzie and Padilla's (1982) study. Positive (+) marks indicate success while negative (—) marks indicate failure on a particular mode of formal reasoning. A subject had to demonstrate success on at least one of the two problems for a given mode of reasoning in order to be assigned a positive mark. Table 1 is presented in two sections, combinations of patterns which support the hierarchy and those which negate it. The percentages are based upon 93 subjects (rather than 99) since six subjects yielded negative marks on all three variables; a pattern which neither supports nor negates the proposed hierarchy.

Table 1

Combinations of Subject's Responses which Support and Negate that Proportional and Probabilistic Logic are Necessary Prerequisites for Correlational Logic (n=93)

Proportions	Probability	Correlations	Percent Supporting Hierarchy
-	+	-	8.6
+	-	-	10.7
+	+	-	8.6
+	+	+	37.6
			Total 65.5
			Percent Negating Hierarchy
-	-	+	11.8
-	+	+	11.8
+	-	+	10.7
			Total 34.5

The results of Table 1 provide support for the proposed hierarchy; that the attainment of proportional and probabilistic reasoning skills contribute to success on correlational reasoning ability at the tenth grade age level. In total, 65.5% of the subjects response patterns supported the hierarchy, while 34.5% negated it. Those results are different from McKenzie and Padilla's (1982) study

in which only 44.8% of the subjects yielded response patterns which support the hierarchy. However, the differences found between the two studies may be attributed to a wider range of developmental differences in the subjects of each study. Since over 60% of the subjects in McKenzie and Padilla's (1982) study were from grades six through eight, it is possible that many of them were in transitional points of development where inconsistencies in reasoning patterns are not uncommon. Additional support for this argument may be found from the response frequencies on proportional, probability and correlation problems analyzed by Karplus et. al. (1980) in which substantial fluctuations in performance were observed in transitional subjects (between concrete and formal operations) from grades six through ten.

EVIDENCE FOR COGNITIVE STRUCTURES

Factor analytic studies involving the TOLT have been conducted by other researchers (Tobin and Capie, 1981; Padilla et. al. (1983) for the purpose of establishing construct validity. There is consensus that the items of the TOLT tap a common underlying construct (formal reasoning) by virtue of the fact that single factor solutions were obtained with relatively high correlations between each mode of reasoning and the factor. There are however, more subtle inferences that may be drawn if the results of the factor analyses are examined further.

Since factor analyses provides communality estimates (h^2) which represent the variance that a particular variable has in common with one or more of the remaining variables of that factor, $1-h^2$ represents that portion of the variance that is unique to that variable (Rummel, 1967). The unique component of the variable may be further decomposed into an error term, and the specific component of the variable (Harman, 1976). The specific component is called the specificity of the variable and shows the portion of the variable that is not due to random error; or the portion of the variable's observed variance that is due to a factor specific to that variable (Kim and Mueller 1978). It is within that specific component of each variable where evidence may be found which suggests that the five modes of formal reasoning represent something more specific than one overall operation; viz., distinct interdependent cognitive structures.

Principle axis factor analysis was used employing the Kaiser (1960) criterion in order to replicate Tobin and Capie's (1981) procedures on the five formal reasoning variables. In addition, the uniqueness and specificity values for each variable were derived from the communality estimates following Harman's (1978, pp. 18-21) procedures. Table 2 shows the results of that analysis.

The factor structure loadings and communality values add support to the validity of Tobin and Capie's (1981) findings; the five variables do not represent one underlying cognitive construct (formal reasoning). Furthermore, the specificity values for each variable add empirical support for the existence of more rudimentary, singular cognitive structures which Piaget et. al. (1977) and Inhelder and Piaget (1964) theorized to develop in parallel stages. Such structures precede operations; develop in mutual dependence of each other, and when combined, represent the full expression of an operation.

Table 2

Factor Structure Loading, Commuality, Uniqueness and Specificity of Hypothesized Cognitive Constructs

Modes of Reasoning (Hypothesized Structures)	Factor 1 Structure Loading	Commuality (h ²)	Unique Component (uj ²)	Specific Component (bj ²)
Proportional Reasoning	.62	.39	.61	.43
Controlled Variables	.66	.43	.57	.39
Probabilistic Reasoning	.62	.39	.61	.22
Correlational Reasoning	.61	.38	.62	.18
Combinatorial Reasoning	.63	.39	.61	.32

(Eigenvalue=1.98; n=99)

FORMAL OPERATIONS AND PRINCIPLED MORAL REASONING

Stepwise multiple regression was performed to determine to what extent specific modes of formal reasoning account for variance in postconventional moral reasoning at the tenth grade age level. Table 3 displays the correlation coefficients obtained prior to the analysis. Table 4 shows the results of the regression analysis. It should be noted that the correlation of the TOLT with the DIT in Table 3 was highly significant (42.6, $p=.0001$). This finding is consistent with present developmental theory; that a linkage exists between the two distinct domains of cognitive and moral reasoning. While the general correspondence between the two domains has been established (see introduction), the development of the TOLT and DIT now made it possible to examine what specific cognitive structures contributed to moral reasoning. It was found that combinatorial and correlational reasoning accounted for 22 percent of the variance of principled moral reasoning ($p=.001$). Controlling variables, proportional and probabilistic reasoning did not significantly contribute to moral reasoning. It is possible for the variables selected into the equation to change across samples with different developmental characteristics. Perhaps other variables would take on new importance with older subjects.

Scores of 4 or higher on the TOLT are considered to represent those which may be classified as "formal thinkers" (Padilla et. al. 1983). The mean for the tenth grade student's TOLT score was 5.1 (SD=3.1; standard error of measurement .31). (Note: the mean for the DIT scores was 17.9; SD=6.8; standard error of measurement .73). Therefore, it would appear that the middle high school years represent the point of consolidation of early formal cognitive structures which are related to the emergence of principled moral reasoning. This latter point supports the hypotheses of Inhelder and Sinclair (1969) and Kuhn et. al. (1977) which view logical operations as a "processing mechanism" central to other areas of development (e.g.; moral development).

The fact that combinatorial reasoning and correlational reasoning were found to significantly account for variance in principled moral reasoning adds empirically to our understanding of the cognitive prerequisites that are necessary for the utilization of moral judgment. For example, Kohlberg (1973b)

Table 3
Pearson Correlation Coefficients Between Postconventional Moral Reasoning
and Formal Reasoning Variables (n=80)

	Formal Reasoning Variables				
	Proportional Reasoning	Controlling Variables	Probabilistic Reasoning	Correlational Reasoning	Combinatorial Reasoning
Postconventional Moral Reasoning	23.2 $p=.01$	31.5 $p=.002$	19.5 $p=.04$	39.2 $p=.0001$	42.6 $p=.0001$

Table 4
Stepwise Multiple Regression for Formal Reasoning Variables on Postconventional Moral Reasoning

Step	Variable	R ²	FOBS (to enter)	DF	BETA	FOBS (Full Model)
1	Combinatorial Reasoning	15.7	14.5**	(1, 78)	.396	14.5**
2	Correlational Reasoning	22.0	6.2*	(2, 77)	.275	10.8**

*p .005

**p .001

stated that part of postconventional reasoning is the ability of an individual to arrive at a decision having sought knowledge of all competing claims, facts, and interests, to understand the correlative nature of rights and duties, and to apply reversibility in order to consider all possibilities as a criterion of fairness for a moral decision. The present research indicates that combinatorial and correlational reasoning are indeed instrumental in the principled reasoning process.

IMPLICATIONS

The results of this study have emphasized the developmental importance that formal reasoning skills have on the individual. It would appear to be pedagogically wise for teachers to stress proportional and probabilistic reasoning skills before students are expected to solve or understand problems involving correlational reasoning. This would promote more consistent reasoning patterns on behalf of the students.

The specificity values derived from the factor analysis of the TOLT items provided evidence for the existence of singular, inter-dependent cognitive structures. This finding suggests that students do not simply apply one set of formal operations to different problems; rather they apply different interdependent structures to solve different kinds of problems. This distinction is of theoretical importance in terms of understanding how individuals come to construct knowledge from experience. Hence, teachers should not necessarily expect that a student who exhibits good combinatorial reasoning skills can then simply apply those same skills to solving other abstract tasks. It appears to be the case that each mode of formal reasoning as measured by the TOLT possess fundamentally different and unique cognitive attributes.

Finally, the relationship between the student's scores on the TOLT and DIT is important to consider. The students in this study could be classified as "formal thinkers" as a group, and yet this group displayed only 18 percent usage of principled stages of moral reasoning. This would suggest that the consolidation of early formal structures is needed before students can be expected to employ principled moral reasoning. Teachers who attempt to promote moral development in the classroom by discussing various ethical issues should not presume that formal thinkers will necessarily use reasoning on problems at the principled level. However, since combinatorial and correlational reasoning were important predictors of principled moral reasoning, teachers should stress the importance of those cognitive skills in the realm of solving social problems.

LIMITATIONS OF STUDY

In most studies, there exists a realistic trade-off between theoretical integrity and practical implementation of the study. One aim of the present study was to see if more interpretable results could be obtained to support the proposed hierarchy by using subjects from one grade level (rather than combined grade levels which were analyzed as one group in McKenzie and Padilla's (1982) study). An improvement of the present study would be to collect data on several grade levels with larger sample sizes and observe any development differences which may exist across various age levels. Arrangements with the public school system in Delaware have been made and data collection is in progress. The following study will attempt to broaden our

understanding of the interrelationship which exists among cognitive structures and the role they play in moral reasoning.

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IMAGERY IN BIOFEEDBACK: PICTORIAL OR PROPOSITIONAL?

Albert B. Miller

ABSTRACT

The serendipitous discovery of the use of 'inverted' imagery by a subject in a thermal biofeedback control task led to an investigation of the structural nature of the image and of the difference in effectiveness of control by inverted and non-inverted imaginal representation. The finding that control performance was superior when subject was given instructions to use only a pictorial image, which eliminated subject-generated propositional elements contained in his inverted image, suggests that the complex nature of the propositional image may have limitations as a technique for effecting voluntary control of temperature. The importance of these findings for an analysis of the nature of imaginal representation in biofeedback is discussed. The results of the study suggest the utility of Lang's bio-informational theory of emotional imagery and his notion of the image as a conceptual network.

INTRODUCTION

The issues relating to the concept of mental imagery and, in particular, the way in which representations for mental imagery are handled by the brain, have been discussed at length in the literature. Two papers in particular (Anderson, 1978; Pylyshyn, 1973) provide extensive reviews of both the concept of mental imagery and the debate over representations of mental imagery. The major issue which emerges from these theoretical discussions is the extent to which propositional versus pictorial information dominates image representations. Anderson, for example, appears to favor the dual code model of Paivio (1971) who proposed two types of information representations, visual and verbal. Anderson further argues that the issue of representation is essentially indeterminant, and this constitutes the major reason why proponents of the various positions have not been successful in distinguishing pictorial representations from propositional ones. Pylyshyn, on the other hand, argues that mental representations associated with images are conceptual and propositional rather than sensory or pictorial.

The purpose of this paper is not to enter into these debates but rather to present some serendipitously obtained observations that appear related to these issues and bear directly on the kinds of representations of mental images that may be used by subjects in studies of voluntary control using biofeedback procedures.

The subject of this study has for a number of years had a form of epilepsy which caused him concern about his ability to control simple movements (e.g., dressing, using utensils in eating, etc.). During the course of a series of clinical procedures employing various biofeedback modalities designed to aid psychomotor control by the subject, it was noted that in attempts to manipulate peripheral blood flow, he used what will be here referred to as 'inverted imagery.' This was discovered during a session in which he had been asked to attempt to raise and lower the temperature of his finger by any technique which he felt might work. At the end of the session, he was questioned as to how he was attempting to manipulate his temperature. He

reported that when trying to raise the temperature of his finger, he would visualize himself putting his hand in a bucket of ice water, and in order to lower the temperature of his finger, he would create an image of placing his hand over a hot oven. This response was most unusual since in over five years of conducting similar studies using thermal biofeedback, no subject had ever presented this kind of inversion of visual imagery. It was not immediately clear if this was simply a verbal error on his part and in order not to alert him to my interest in his imagery methods, he was not questioned further. Instead, it was decided to discretely delay our clinical procedures and proceed with an attempt to verify the validity of and gain insight into the rationale for the subject's image representations.

A number of studies in the area of biofeedback have specifically examined the role of mental imagery in the analysis of voluntary control of physiological processes. Imagery effects have been examined, for example, in the context of autogenic training (Blizard, Cowings, & Miller, 1976), heart rate (Jones & Johnson, 1980), the relationship between self-generated imagery and physiological responses to stimulus activity and valence (Jones & Johnson, 1978), the relationship between control of skin potential responses to imagery and internal perception (Ikeda & Hirai, 1976), the maintenance of relaxation responses during extinction (LeBoeuf & Wilson, 1978), and a large number of studies in the clinical area use mental imagery (Stroshal & Ascough, 1981). Most studies, however, in the area of biofeedback do not address the question of the representational nature of the mental image.

Paivio (1973) and Lang (1979, 1980) have both specifically addressed the nature of the mental image in relationship to physiological effects. Lang (1979), for example, views the image in the brain as a conceptual network which can control somatovisceral responses linked to overt behaviors. Experiments conducted by Lang have also shown (e.g., Lang, 1980) that instructions and shaping of the mental image can produce different physiological patterns.

The report which follows is an examination of changes in the subject's ability to control peripheral blood flow under conditions where the image was inverted (i.e., when attempting to raise the temperature, he created a cold image and in order to lower the temperature, he created a warm image) and non-inverted imagery where he was specifically instructed to make his mental image consistent with the temperature change desired.

METHOD

Subject

The subject was a 51-year-old male who had been referred to our laboratory for a general clinical program directed toward developing self-control over psychomotor responses. He had a history of epileptic seizures for which he was taking medication, however, no detailed neurological or medical information was available.

Apparatus

The study was conducted in an 8 ft. by 10 ft. temperature-regulated room with a one-way observation window. Temperature was monitored by Coulbourn Instruments temperature modules using Yellow Springs #709A thermistors. This system provided temperature resolution of .01°C.

Procedure

When the subject reported to the laboratory, he was asked to complete the Multiple Affect Adjective Checklist (MAAC). He was then seated in a reclining chair and thermistors were attached with surgical tape to the mid-forehead (FHD), behind the left ear below the mastoid process (LMAST), and to the volar surface of the right and left middle fingers (RMF, LMF) midway between the fingertip and the most distal joint. These four sites were used to maintain continuity with our previous clinical work with the subject. All control sessions involved only the RMF. His hands rested on the arms of the chair so that the tips of the middle fingers were extended slightly over the ends of the chair arms. After sensor attachment, he was asked a few general questions about dominant hand, general hand temperature (warm or cool), and present hand temperature (warmer than usual, cooler than usual, or same as usual). He was asked to relax and sit quietly during the baseline period. The MAAC, attachment procedures, and questions provided an adaptation period of at least 15 minutes prior to data recording. The room lights were dimmed slightly, then the experimenter left the room and monitored temperature in an adjacent room.

Room temperature varied between 70° and 75°F during the course of the study, however, room temperature in any given session was maintained at $\pm 1^\circ\text{F}$ from initial session temperatures. Room temperature for most sessions was maintained at 72° to 75°F since he was most comfortable in this temperature range. No special attempts were made to regulate humidity which varied between 45 and 70 percent throughout the course of the study, but averaged less than 1 percent variability during any session.

Prior to instituting the experimental control sessions, three 30-minute baseline sessions were run in order to establish baseline trends and to determine the value to be used for ipsitizing the control trials according to procedures used by Taub and his associates (Herzfeld & Taub, 1980; Taub, 1977; Taub & Emurian, 1976). Although Taub's procedures were used, in order to enhance the power of the design of control trials, a bi-directional control procedure was used. Under these conditions, the subject's temperature was monitored every 10 seconds and after a clear direction of trend was established, he was asked to change his temperature in the direction opposite to the on-going trend. The experimenter observed and recorded any movements of the subject during the baseline period through the one-way observation window. Visual feedback was provided by a display of 20 red LED units. The LED's were activated by .1°F changes in temperature.

Three conditions were used to evaluate temperature control: (a) an initial inverted imagery condition with no feedback during which I verified that subject's inverted imagery was not a verbal error but rather a consistent imagery technique, (b) three sessions using inverted imagery, two sessions with feedback and one without, (c) three sessions of non-inverted imagery, two sessions incorporating feedback and one without feedback.

Instructions to the subject in conditions one and three were to attempt to manipulate his temperature in the instructed direction using any technique which he felt might work. In the inverted imagery session, he was specifically instructed to reverse his previously utilized thermal imagery such that when attempting to raise his temperature, he should visualize only the image of his

hand over the hot oven and when attempting to lower his temperature, he should attempt to visualize only his hand in a bucket of ice water. He was encouraged to eliminate all other manipulations of his image which were used in the inverted sessions. At the end of each session, he was questioned as to whether or not other strategies were used. The duration of the control sessions were three minutes, however, the number of individual control periods within a given session varied depending upon how long it took to establish a clear temperature trend.

RESULTS

Results for the three conditions are shown in Table 1 for each session. Pre-experimental baseline temperatures remained relatively consistent throughout. The four initial inverted imagery sessions with no feedback confirmed consistent use of inverted imagery. He expressed no indication that his strategy might be unusual. At the end of these four sessions, the subject was asked to explain his rationale for the use of the inverted imagery. He explained that when he visualized placing his hand in a bucket of ice water, this generated the feeling of being cold and when he is cold, he will use what techniques he can to get warm. Thus, the sequence was an image of being cold which generated a desire to be warm which led to efforts to produce warmth. The opposite logic was used to explain his rationale for using an image of his hand over a hot oven to produce a cool feeling (i.e., an image of his hand being hot produced the desire for it to be cooler resulting in his efforts to lower the temperature in his hand).

Of the nine control periods used in the initial inverted imagery condition, four were in the instructed direction and produced an average control effect of .64°F.

The three sessions which followed examined the use of the inverted imagery strategy under conditions of feedback and no feedback. Subject was instructed to use the same imagery techniques that he had been using. During these three sessions, there was a total of seven control periods. Four of these seven periods produced temperature changes in the instructed direction. The average control effect for those periods where control was successful was .61°F.

In the non-inverted imagery condition, there were six control periods, five of which produced temperature changes in the instructed direction with an average control effect of 1.21°F. Under all conditions the largest control effects occurred with no feedback. In addition, greatest magnitude of change for all conditions was in the increase direction.

Figure 1 illustrates the general procedures used and the results for Session 3 of the non-inverted imagery condition with no feedback which produced the clearest control effects.

Discussion

The absence of studies which provide a clear indication of the optimal techniques of physiological self-regulation has been previously noted by Herzfeld and Taub (1980). They have also noted, as have numerous researchers and clinicians in the area of biofeedback, that even though subjects are not specifically instructed to use imagery in a control task, they often do on a self-initiated basis. This study of the use of inverted images by a subject for

Table 1
Temperature Values in Degrees Fahrenheit for Inverted and
Non-Inverted Imagery Sessions With and Without Feedback

Session Number	Mean Baseline Temperature (pre-experimental)	Feedback	Instructed Control Direction	Amount and Direction of Change
Initial Inverted Imagery--No Feedback				
1	93.50	No No	Down Down	-.41* +.58
2	91.85	No No	Down Down	+.93 -.95*
3	93.90	No No No	Down Up Down	+.99 +.14* +.13
4	94.10	No No	Down Up	+.74 +1.06*
9 Control Sessions 4 in Instructed Direction (*) Average Control Effect .64°F				
Inverted Imagery--Feedback and No Feedback				
1	93.32	No No No	Up Down Up	+1.02* +1.09 +1.12*
2	93.51	Yes Yes	Up Down	+.07* +.59
3	91.63	Yes Yes	Down Down	-.22* +.18
7 Control Sessions 4 in Instructed Direction (*) Average Control Effect .61°F				
Non-Inverted Imagery--Feedback and No Feedback				
1	93.18	Yes Yes	Up Down	+1.60* -.37*
2	93.81	Yes Yes	Up Down	+.78* +.40
3	93.22	No No	Up Up	+2.17* +1.14*
6 Control Sessions 5 in Instructed Direction (*) Average Control Effect 1.21°F				

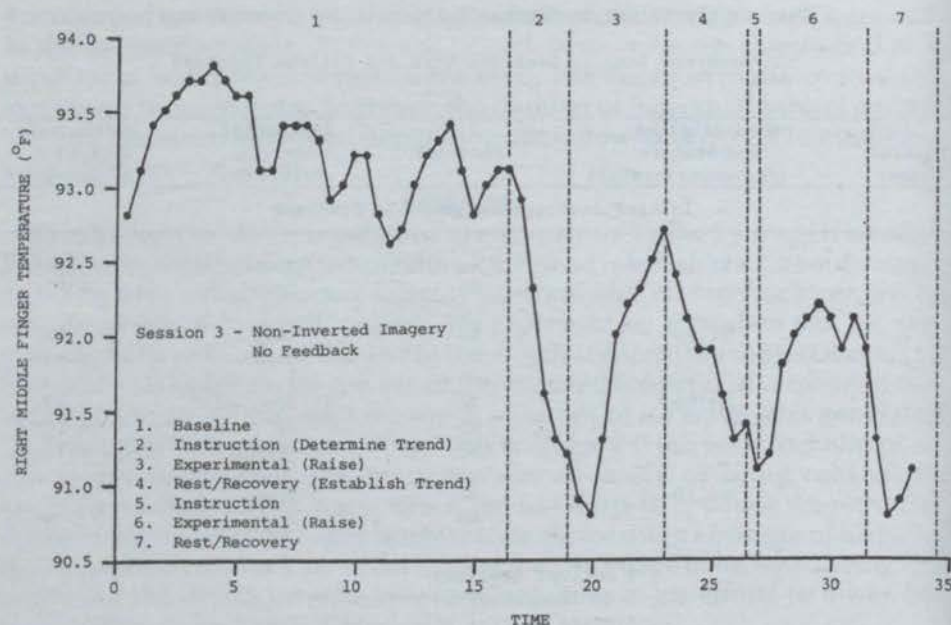


Figure 1. Subjects Control of Temperature of Right Middle Finger Using Non-Inverted Imagery with no Feedback.

temperature control emphasizes the need for careful analysis of a subject's imagery representation in biofeedback studies and also suggests some possible modes for examining issues relating to the nature of imaginal representation. The strategy used by this subject showed clear elements of both pictorial and propositional representation. Efforts to separate these elements by instructing him to use only pictorial information provided results which show the clear utility of this procedure and its superiority over the methods constructed by the subject. The results do not, however, provide a basis for concluding that pictorial strategies are more effective than propositional ones.

A number of factors necessitate caution in making conclusions concerning the nature of representation in imagery. These factors include: possible neurological involvement which might bear on the subject's selection of imagery strategy; the subject may also have been more motivated to perform after being alerted to my interest in his particular imagery technique; the presence of a practice effect due to feedback may be involved even though performance was better under all conditions without feedback. For example, feedback may have provided useful information concerning control effects which the subject was subsequently able to utilize more effectively in the absence of external feedback. These results provide strong support for Lang's (1979, 1980) research on the somatovisceral image and the propositional units of the image seems especially relevant to biofeedback designs using imagery. The value of

using a structured image in biofeedback control trials would seem especially appropriate in light of our findings (see, for example, Herzfeld & Taub, 1980; Kuzendorg, 1981). In general, there is a need to be more alert to the structure of images used in biofeedback studies. These results also suggest the utility of designing studies where the effectiveness of this type of imagery is compared with other types of imaginal representations.

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SOME PHYSIOLOGICAL AND BEHAVIORAL CHANGES PRODUCED BY VISUAL IMAGERY

Warren A. Rhodes

ABSTRACT

The present article will describe some innovative ways psychologists and other professionals have used imagery to produce both physiological and behavior changes in humans.

History is replete with examples of great achievers who equated their power of success with their ability to first formulate in their mind's eye an intensely vivid sensory detailed image of that which they desired to create, possess and achieve. Everything that man has ever accomplished and achieved, every great work, every discovery first existed in someone's mind in the form of a vivid image. Every act, every deed that has enabled man to progress and motivated him to excel and achieve was first born three dimensionally in the mind. (Sybervision Systems, Inc., 1982)

As suggested in the above quote, the creative use of imagery has been employed by man throughout history. However, the scientific study of mental imagery and its application to complex human problems have only recently drawn the attention of a large number of psychologists of varied persuasions (Sheikh, 1977)

Thoughts, dreams, mental images, and phenomena that may be experienced by the individual but are not directly observable by others have only recently been extensively investigated by psychologists because these phenomena were just not considered necessary for understanding, or, more importantly, explaining the behavior of man. The present article will describe some innovative ways psychologists and other professionals have used imagery to produce both physiological and behavior changes in humans.

While reviewing the literature on visual imagery, one can find some fascinating investigations which demonstrate the power of visual imagery in stimulating physiological changes. One such study which is most intriguing demonstrated that women could increase their breast size by visual imagery. Over a 12 week period, Willard (1977) taught volunteers to use visual imagery in producing increases in their breast size. The procedure used by Willard is as follows:

The subjects had a practice session in the clinic once a week for the first six weeks and every two weeks for the second six weeks. Using cassette tapes, the subjects were asked to visualize a wet, warm towel over their breasts and to allow this to produce a feeling of warmth. If they were unable to obtain the feeling of warmth with this visualization, they were to add the visualization of a heat lamp shining on the warm towel to facilitate the feeling of warmth. After they were able to obtain a feeling of warmth in the breasts, they were then asked to concentrate on a feeling of pulsation in the breasts, becoming cognizant of their heartbeat and allowing the heartbeat or pulsation from the heart to flow into the breasts. They were then instructed to practice the same imagery and relaxation at home once a day. (p. 196)

Breast measurements before imagery exercises and 12 weeks later revealed an average increase in breast circumference of 1.37 inches. "The circumference is the measurement around the chest at the nipple line with sufficient pressure to pull the nipple down flat with the surrounding breast tissue." (Willard, 1977, p. 196) Those measurements were taken by a physician who was unbiased and not involved in the investigation.

After 12 weeks, 28% of the volunteers had reached the goal they had set at the beginning of the program and desired no further enlargements in their breasts. The study was continued for those who wanted more enlargements. At the end of an additional 12 weeks, 85% of the volunteers could notice a significant enlargement in their breasts and 41% found it necessary to buy larger brassieres. "All of these subjects reported they were pleased with the increase in fullness and firmness of their breasts at the end of the study." (Willard, 1977, p. 196)

While demonstrating the power of visual imagery, Willard's 1977 study left a number of questions unanswered. For example, what was the physiological mechanism through which the growth was accomplished? Perhaps most importantly, if it is possible to enlarge the breasts, an external organ, through visual imagery, then is it also possible to enlarge other internal organs, for example, the heart, kidney, liver, and lungs. The possible medical advancements are certainly breathtaking. Willard provides us with a glimpse of what could be:

There has been considerable speculation for some time on the possibility of the human to be able to increase or decrease the circulation of a given areas of the body. The use of biofeedback has shown that one can definitely warm or increase the circulation in a given area of the body. Whether we may someday be able to shut off the blood flow to a cancerous tumor by biofeedback or through visual imagery is pure speculation. Until we better understand the role of the "host's immune mechanism" in combating cancer, we cannot be sure if it would be better to shut off the blood flow to starve the tumor or to increase the blood flow to increase the availability of the host's defense mechanism. (p. 196)

The recent work of Simonton and Simonton (Bry & Bair, 1978) provides some answers to the question of how to treat cancer using imagery procedures. The Simontons treat patients with terminal cancer using imagery procedures along with traditional medical therapy.

The Simontons' approach is twofold. Those who come to the Fort Worth Clinic work individually and in groups with Carl and Stephanie [Simonton] to explore what may have caused the disease and their reasons for wanting to live--and die. They are also taught a deep-relaxation exercise...after which they visualize; they do this three times a day. In their movies-of-the-mind, they see their cancer and then image an army of healthy white blood cells flush out the malignant cells and the patient then sees himself as healthy, with his immunological system working perfectly. (p. 69)

The Simonton's treatment is predicated on the assumption that our belief systems, our thoughts and ideas, have a direct relationship to our health. When we change our belief system, we change the condition of our health.

The Simontons accept for treatment only those patients who are willing to take responsibility for their disease, that is, who will look at what was happening in their lives that led to the disease and will then do whatever is necessary to make themselves well. (p. 69)

The Simontons have demonstrated that a person's active imagination can discover the cause and then create the cure for his own cancer. In numerous cases, they have shown that the mental pictures created in their patient's mind were so powerful that they stimulated the body's immunological system into destroying even the most widespread malignancy.

Psychologists have used visual imagery procedures in the treatment of various psychologically related problems. Lazarus (1968) has reported the use of visual imagery to help patients overcome depression. In one of his examples, a young female patient was acutely depressed after being rejected by her boyfriend. Lazarus hypnotized the patient and suggested that she imagine herself as he projected her forward into the future. He suggested what she might be doing days and weeks later. Finally, he suggested images six months in the future. At that point he asked her to reflect back on the "previous," actually the current, incident. After dehypnotizing, the patient reported she realized that she was overreacting and that there were other things to do with herself. The treatment, according to Lazarus, completely overcame her depression. Lazarus concluded that contemplation of future positive reinforcements may diminish depressive responses.

Covert sensitization is a treatment procedure incorporating visual imagery. Psychologists have used covert sensitization to help clients overcome problem behaviors that produce immediate pleasure but can prove damaging to the client if indulgence persists. Such problem behaviors may include drinking excessive amounts of alcohol, overeating, smoking, and engaging in deviant sexual behaviors such as having sexual relations with children (pedophilia), exposing oneself (exhibitionism), and having sexual relations with members of the same sex (homosexuality).

The rationale provided the client who wishes to stop engaging in the problem behavior is that he is unable to stop because the behavior is a strong, learned habit which is most pleasurable. One way to treat the problem is to associate the behavior, which produces pleasures, with a stronger aversive consequence. Very simply stated, a person would most likely quit smoking if everytime he begins to smoke, he begins to feel as though he is becoming very sick. Hence, the psychologist who uses covert sensitization typically asks the client to imagine himself about to engage in the problem behavior (e.g., smoking) and, once the image is clear, instructs the client to imagine that engaging in the problem behavior makes him sick, so sick that he begins to vomit. This procedure is carried out in the psychologist's office. Both the problem behavior, smoking, and the aversive consequences are imagined. If the client carefully follows the psychologist's instructions, engaging in the problem behavior in real life will produce the aversive consequences of becoming sick.

Covert sensitization is based on a well documented psychological principle which suggests that people tend to decrease engaging in behaviors that are immediately followed by aversive consequences. Covert sensitization has been used successfully with sexual deviation as reported by Barlow, Lertenberg

and Agras (1969), Brownell and Barlow (1976), and Davison (1968); the use of covert sensitization is suggested for eating problems by Cautela (1966, 1972), Jauda and Rimm (1972), and Stuart (1967). It has also been used successfully with smoking, drinking, homosexuality, obesity and a host of other habit-like behavior problems.

Cautela (1971) has been given credit for coining the term covert sensitization and has used the procedure extensively to treat behavior problems. In the quote below, Cautela (1979) provides a client who wishes to quit smoking with instructions prior to introducing covert sensitization scenes:

I am going to ask you to imagine (a scene) as vividly as you can. I don't want you to imagine that you are seeing yourself in these situations. I want you to imagine that you are actually in these situations. Do not only try to visualize the scenes but try to feel, for example, the cigarette in your hand or the back of the chair in which you are sitting. Try to use all your senses as though you were actually there. The scenes that I pick will be concerned with situations in which you are about to smoke. It is very important that you visualize the scenes as clearly as possible and try to actually feel what I describe to you even though it is unpleasant. (p. 52)

Cautela provides a typical scene he would describe to the client while the client is creating the scene in his imagination:

You are sitting at your desk in the office preparing your lectures for class. There is a pack of cigarettes to your right. While you are waiting, you put down your pencil and start to reach for a cigarette. As soon as you start reaching for the cigarette, you get a nauseous feeling in your stomach. You begin to feel sick to your stomach, as if you are about to vomit. You touch the pack of cigarettes and bitter spit comes into your mouth. When you take the cigarette out of the pack, some pieces of food come into your throat. Now you feel sick and have stomach cramps. As you are about to put the cigarette in your mouth, you puke all over the pack of cigarettes. The cigarette in your hand is very soggy and full of green vomit. The whole desk is a mess. Your clothes are all full of puke. You get up from your desk and turn away from the vomit and cigarettes. You immediately begin to feel better being away from the vomit and cigarettes. You go to the bathroom and wash up and feel great being away from the vomit and cigarettes. (p. 53)

To increase the likelihood that the procedure will stop the client from actually engaging in the behavior in real-life, Cautela would describe other scenes similar to the one above. The other scenes would depict the client smoking in different places, but with the same aversive consequence always resulting. For example, if the client usually smokes on the bus, the vomit would spill not only on him but onto other travelers as well.

Cautela (1979) also would describe some "self-control" scenes which will help the client resist the temptation to smoke. An example of a self-control scene he would use is as follows:

You are at your desk working and you decide to smoke. As soon as you decide to smoke, you get this funny sick feeling in the pit of your stomach. You say to yourself, "The hell with it--I'm not going

to smoke!" As soon as you decide not to smoke, you feel fine and proud that you resisted temptation. (p. 54)

According to Cautela, each treatment session would consist of 10 vomiting scene descriptions, alternated with 10 escape or self-control scenes. The client would be instructed to practice the 20 scenes at home twice a day. Additionally, the client would be instructed to say "Stop!" to himself whenever he gets the urge to smoke during the day. Similar to covert sensitization, other treatment procedures which contain a visual imagery component have been used to overcome fears (Lazarus & Abramovitz, 1962) and speech disorders (Silber, 1965), treat delinquency (Shapiro, 1976), and motivate youth toward self-improvement (Rhodes, 1980).

The growing field of sports psychology has found visual imagery procedures to be essential in enhancing the performance of athletes. In this field, visual imagery has been used to help increase attention, concentration and reaction time, provide brief rest periods during competition, improve endurance, decrease the chance of "choking" and increase overall performance.

Many top athletes have naturally incorporated visualization processes into their training routines. Fran Tarkenton, statistically the all-time leading passer in the National Football League, visualizes most aspects of an upcoming game. He studies each defensive opponent in his mind, mentally analyzes defensive calls. (Hickman, 1980, p. 20)

Jack Nicklaus attributes much of his success in golfing to his use of visualization.

I never hit a shot, not even in practice, without having a very sharp, in-focus picture of it in my head. It's like a color movie. First I "see" the ball where I want it to finish, nice and white and sitting up high on the bright green grass. Then the scene quickly changes and I "see" the ball going there: its path, trajectory, and shape, even its behavior on landing. Then there is sort of a fadeout and the next scene shows me making the kind of swing that will turn the previous images into reality. (Hickman, 1980, p. 120)

Helping professionals have used visual imagery procedures to help people make tremendous improvements in their lives. Several descriptions have been presented. In one case, the improvements have been physiological, i.e., halting the spread of cancer. In other cases the improvements have been behavioral, ranging from decreasing homosexuality to increasing athletic skills. Man's ability to use visual imagery to effect improvements in his life is most intriguing. "The sorcery and charm of imagination; and the power it gives to the individual to transform his world into a new world order and delight, makes it one of the most treasured of all human capacities." (Shorr, 1977, p. 23) These professionals have only recently extensively studied visual imagery and hence their knowledge only represent an inkling of imagery's power and potential in affecting behavior.

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HUMANIZATION: THE HEART OF HOLISTIC EDUCATION SELF-ACTUALIZATION THROUGH THE ARTS

Donald A. Parks

Creative people have the gift of the "divine madness," to borrow the term used by the classical Greeks. They do not run away from non-being, but by encountering and wrestling with it, force it to produce being. They knock on silence for an answering music, they pursue meaninglessness until they can force it to mean.

The oldest extant medical treatise in the world reveals that the ancient Egyptians created the word "brain," and knew that the brain controlled the mechanisms of the body...to move the toes, the feet, and so on. Moreover, the Egyptians believed that the seat of the intelligence was mummified, all but the heart was removed, for who would want to be awakened by the god Ra and not be able to think!

It is interesting that on the other side of the world, the Chinese created two symbols for thinking and feeling, and declared that to think meant to examine with one's heart.

Homeric Greek had two words for thinking: **phren**, which is the rational, reflecting reason, and **nous**, which is insight, love, understanding, and thought. As thought, **nous** can detach itself from the person and alone color the content of thought--for this is what love and insight do. This explains the later significance of **nous** in philosophy...and the belief that the access to the Divine...the spark of the Divine that is within us...is the **nous**.

Today, we should speak of what the Egyptians and Chinese recognized as the function of the heart, and that which the Greeks described as the **nous**, as the right side of the brain. It is a point well to remember that love is the right side of the brain...which means that love and knowledge go very closely together. Throughout history, and in the world as we see it today, knowledge without love is frequently inhumane.

Therefore, we should strive toward ways in which we can train our students to love in an aware and knowledgeably-directed way. "To know is to love," as Leonardo might have said, "our first duty is to know." (Gardner, 1975, p. 530)

Research indicates that the right side of the brain is developed through the arts. The left side of the brain is specialized for language functions and is the analytic and rational half; the right side is the intuitive, imaginative side, specializing in holism, perception, and aesthetics.

Until now, our educational methods have emphasized the left side of the brain, and virtually neglected the right side.

What, then, is the goal of education? Is it the collection of facts? Is it the assimilation of ideas? Is it an appreciation of learning as an enjoyable exercise? Is it all these--or all these and more? We must guard against creating a gap between academics and ethics. We must develop avenues through which we can transmit those moral values that must be inculcated in our children if they are to grow into fruitful and joyous human beings.

Why is it that so many persons go through life unconscious of the beauty of the world?

Why should it take a whole lifetime to learn how to love living?

Why shouldn't the child, from the beginning, be taught that which he will be glad to know, and know how to use at age 40 or 60?

A child is an active, dynamic, imaginative, exploring, creative bundle of energy. He is much more than a passive intellectual sponge. He wants to see and feel, mark and color, build and take apart, construct and reconstruct. These are his ways of learning, of adjusting, of developing physically, emotionally, and intellectually.

The child wants to feel himself into situations through as many senses as possible. In addition to imaginatively creating, he also likes to relive, recreate, interpret, and convey to others the "feeling essence" of important experiences that he has had. A human being is a feeling creature, as well as a being-and-doing creature. He not only "does," but he responds with feeling to what he does. He works from feeling to feeling. Feeling establishes the inner drive, sets the focus, creates the attitude, and determines personal values. The child is born with a tremendous drive to use his senses to explore, to experiment, and to try. This is the pre-verbal learning system of a "human being."

At first, a child has only one way of learning--direct experience through the senses. You cannot give a baby knowledge just by talking to him. He has to create his foundational knowledge himself directly through the senses of sight, sound, taste, touch, and muscular feelings.

When a child is curious and exploring, when he is pursuing a conceived idea, when he struggles through trial after trial, seeking to solve a problem by himself, he is doing the greatest amount of meaningful learning. He is "learning to learn," as well as acquiring knowledge.

Except for the very young children, many people today are almost incapable of creating their own satisfying activities, or of finding much meaning in what they do. They cannot see, hear, or feel much beyond the materially practical. They struggle to obtain meaningful experiences through creative activities.

There is a fear today of losing one's self and one's autonomy, the fear of having one's independence taken away.

Paul Cezanne strongly believed that he was discovering and painting a new form of space which would radically influence the future of art, yet he was at the same time filled with painful and ever-present doubts. The relationship between commitment and doubt is by no means an antagonistic one. Commitment is healthiest when it is not without doubt, but in spite of doubt. To believe fully and at all a contradiction it presupposes a greater respect for truth, an awareness that truth always goes beyond anything that can be said or done at any given moment. "To every thesis there is an antithesis, and to this is a synthesis." Moral courage is the righting of wrong; creative courage, in contrast, is the discovering of new forms, new symbols, new patterns on which a new society can be built.

Thus, the "artists" (that I phrase in curriculum study and education), in which term I hereafter include the poets, musicians, dramatists, plastic artists, as well as saints, are a "DEW" line, to use McLuhan's phrase; they give us a "distant early warning" of what is happening to our culture. In the art of our day, we see symbols galore of alienation and anxiety. But, at the same time, there is form and discord, beauty amid ugliness, some human love in the midst

of hatred--a love that temporarily triumphs over death, but always loses out in the long run. The artists thus express the spiritual meaning of their culture. Our problem is: can we read their meaning aright?

The encounter--"the reality of experience"--is surely the basis for all creativity. The task will be "to forget in the smithy of my soul," as arduous as the blacksmith's task of bending red-hot iron in his smithy to make something of value for human life. Art education then is created, first of all, out of inspiration derived from the artists' symbols and forms.

Through art, then, the creating of one's self in what is called self-actualization can occur. The self is made up, on its growing edge, of the models, forms, metaphors, myths, and all other kinds of psychic content which give it direction in its self-creation.

It is the process of becoming.

Despite the obvious determinism in human life--especially in the physical aspect of one's self in such simple things as color of eyes, height, relative length of life, and so on--the is also, clearly, this element of self-directing, self-forming; thinking and self-creating are inseparable.

Sartre's argument that we invent ourselves by virtue of the multitude of our choices may be overstated, but its partial truth must nevertheless be admitted. It is this argument that brings about humanization through the arts and the heart of holistic education.

Holistic education involves freedom. Human freedom involves our capacity to pause between stimulus and response, and in that pause, to choose the one response toward which we wish to throw our weight. The capacity to create ourselves, based upon this freedom, is inseparable from consciousness or self-awareness.

Clearly, self-creating is actualized by our hopes, our ideals, our images, and all sorts of imagined constructs that we may hold from time-to-time in the forefront of our attention.

As Sir Herbert Read puts it, "Thus, in the history of culture, artistic discovery precedes other forms. On the basis of this (artistic) activity, a symbolic discourse becomes possible; and religion, philosophy, and science follow as consequent modes of thought. This is not to say that reason is the more civilized form and art the more primitive one, in a pejorative sense--an egregious error unfortunately often found in our rationalistic western culture. This is, rather, to say that the creative encounter in the art form is 'total'--it expresses a wholeness of experience; and science and philosophy abstract partial aspects for their subsequent study." (1960, p. 2)

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THE POLITICAL EVOLUTION OF DR. MARTIN LUTHER KING, JR.: FROM CIVIL RIGHTS TO HUMAN RIGHTS

Clenora Hudson - Withers

Speak the truth to the people
Talk sense to the people
Free them with reason
Free them with honesty
Free the people with Love and Courage and Care for their Being
Spare them the fantasy
Fantasy enslaves 1

"Speak the Truth to the People"

These opening lines of a highly perceptive poem by black poetess, Mari Evans, strongly articulates the urgent need for the black man to both recognize and expose the underlying problem of the non-white element, oppression, which engulfs his very existence--mentally, politically, socially, economically, and spiritually. Indeed the thrust of the message here is precisely the level of consciousness that the man of the hour, Dr. Martin Luther King, Jr., had reached at the time of his cruel and most untimely assassination in Memphis, Tennessee, on April 4, 1968.

The intent of this paper is to trace the political evolution of this great thinker and activist, beginning with his early political and social positions of moral persuasion, from passive resistance and integration (stemming from his strong belief that segregation is morally wrong) to his final stage of development which establishes the direction of the continued movement of an international plateau.

If one were to ask the average adult, ranging from the ages of the late 20's up, "who was Dr. Martin Luther King, Jr.?", the overall consensus would be that he was a national black civil rights leader; he was a southern black minister who strongly advocated non-violence and mass civil disobedience as a collective technique for effecting social action and change in America; he was a 1964 Nobel Peace Prize winner and the founder and organizer of the Southern Christian Leadership Conference (SCLC), 1957; and, of course, he was a member of a number of other national and international organizations, all of which made possible for his philosophy of moral persuasion as a means resolving the plight of the black American to dominate the issues. Pose the query of the youths ranging from the teens to the mid-20's, and almost invariably you will receive responses reflecting very vague, or fragmented notions of who this man was and for what he lived and died. Needless to say, if asked of the youths below this age level, "who was Dr. Martin Luther King, Jr.?", the extent of their response would be that of either confused nebulosity concerning King's identity, or blatant oblivion to his true level of existence as it affected the American society in particular and the world in general.

Just months before Dr. Martin Luther King, Jr. was assassinated, he delivered a number of incisive lectures for a Canadian broadcast entitled "The 1968 Massey Lecture Series" in which he explicated some of the critical issues conflicting with the tradition. His first was entitled "Impasse in Race Rela-

tions." The critical issue here was not if we will win the blatant battle of racism, but rather by what course of action this battle shall be won. Here, King began to analyze the various phases of the struggle, which dominated the political turmoil of the American society for over a decade.

First, we have the early 1950's, when the black man closed the door of subservience, etc., a phase which effected in a number of way, for example, bus boycotts, marches and sit-in demonstrations. Unceasingly, King emphasized the overwhelming significance of non-violent protest. These demonstrations effectively dramatized the essential meaning of the conflict, exposing both the **evil-doer** and the **undeserving victim**. During this period, thousands of southern laws of segregation were eradicated. Race riots, a form of black resistance for white man's resistance, which came in the form of bigotry, ensued. In reaction to this, King persisted that "a solution of non-violence remains possible; however, non-violence must be adapted to urban conditions and urban moods." He asserted that non-violent protest must evolve to a new, higher level, "mass civil disobedience" so as to uplift the black man's impatience and, of course, to tighten up on bigotry. The civil rights movement must exceed mere verbalism; it must be an active force designed to literally dismantle evil without evil or violence.

The second speech was entitled "Conscience and the War in Viet-Nam, and the U.S. Involvement in it." Here, Dr. Martin Luther King, Jr. expressed anti-war sentiments, thereby making his departure from his earlier position of contentment with being apolitical on international affairs. He illuminates the **enemy** of the mass, which is the expense of warfare. Moreover, he comments on the enemy to the blacks in general and exposes that more blacks are on the front line in Viet-Nam, dying en masse, indeed, a cruel manipulation of poor blacks. He also speaks of the major contradiction of violence of the government pitted against the prescribed non-violence in the ghetto. He questions the so-called survival of the world through war or mass murder, an intrinsically paradoxical impossibility. At this point, King establishes the role of the minister, which is to speak for the weak, the victims of the war. Moreover, he interjects the breach of the Geneva Agreement to end the Viet-Nam war on the part of the American government and censors it openly.

King's third speech, "Youth, Action, and Conscience," briefly addresses three major groups in the American society: status quo, revolutionaries (radicals), and hippies.

Also, he illuminates that the Civil Rights Movement had reached an international level, exemplified by the Peace Corps. Thus the relevancy of international collectivity on all levels with people of all walks of life aspiring to shape a **new world** becomes crucial.

"Non-Violence and Social Change"--the validity and justification for massive civil disobedience, was the subject of his fourth speech, where he expressed his belief in and focus on his strategy for social change. As background information for better appreciating King's philosophy of passive resistance and civil disobedience, it must be established that he was heavily influenced by Mahatma Gandhi and Henry David Thoreau, respectively. Be that as it may, King establishes that the next stage of the movement is to become international--socially, politically, and economically; it must necessarily internationalize itself. He insists that a planetization of our movement

for social justice is imperative. The concern solely for the tension between black and white in America alone must cease; indeed, the tensions of the East and the West, of the individualist and the collectivist, etc., come into focus. He cautions that the movement in our country alone is insufficient and cites that some of the problems of Latin America, for example, are grounded in our country. He asserts, moreover, that the plight of South Africa can be rectified by American and Britain intervention alone. Hence, internationalism is a must because of the intrinsic, interweaving nature of problems of mankind on the whole. He concludes that nations and individuals are interdependent and that, indeed, life on a whole is interrelated.

The fifth and final speech, "Sermon on Peace", was originally delivered as a Christmas sermon on peace at Ebenezer Baptist Church in Atlanta, Georgia, on Christmas Eve, 1967--his last Christmas. Here, King makes a powerfully emotional appeal for Universal Good Will and calls for a global end to **war, poverty, and inequality**. He cautions that a destructive means can no longer be used for constructive ends; the ends and the means must cohere. **Peace** cannot be merely a goal as is the case, for example, of Reagan's MX cluster missile as a peacemaker. It must be the means by which that goal is realized. A destructive means can never bring about a constructive end! King concludes by calling for a non-violent affirmation of the sacredness of all human life. The sacredness of human personality commands the elimination of exploitation. Clearly King has developed to a humanitarian plateau, replacing civil rights with human rights.

In conclusion, therefore, through this recapitulation of Dr. Martin Luther King's political evolution we witness his progression from domestic social integrationist to global struggle advocate, from passive resistance to active exposure, from civil rights to human rights. Indeed, Dr. Martin Luther King had reached a level of better comprehension of Truth concerning the true nature of the struggle, realizing that the exposure of that Truth to world opinion would be the Waterloo of the common enemy. He was undoubtedly a man ahead of his time, comprehending and appreciating the significance of a new international order that would promote the reduction of poor and rich nations as a strategy to promote peaceful change. It is my conjecture, then, that had Martin Luther King, Jr. lived on, he would have continued the legacy handed down to him by past leaders, i.e., Frederick Douglass, Gabriel Prosser, Nat Turner, Henry Highland Garnet, Marcus Garvey, W.E.B. Dubois, Malcolm X, the Honorable Elija Muhamet and Sojourner Truth, to name a few.

Martin was assassinated nonetheless; however, that act did not stop the struggle, did not bury the legacy, did not kill the ideal. The fact that the struggle yet continues is clearly exemplified by the contemporary progressive leaders who are now creating an international network of oppressed peoples of the world. They are offering feasible alternatives to world problems through internationalism. King's philosophy in the end clearly identifies the economic nature of the struggle, and thus the thrust of his culminating stage of development, which is the struggle we are now experiencing, necessarily commands the realization of a new economic system, indeed, his final dream of a new order.

Let a new earth rise. Let another world be born. Let a bloody peace be written in the sky. Let a second generation full of courage issue forth, let a people loving freedom come to growth, let a beauty full of healing and a strength of final clenching be the pulsing in our spirits and our blood. Let the martial songs be written, let the dirges disappear. Let a race of men now rise and take control! 4

"For My People"
by Margaret Walker

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INTERPERSONAL COMMUNICATION: AN INTERACTIONAL-TRANSACTIONAL PERSPECTIVE

Elise J. Brathwaite

If we look at the etymology of the word interpersonal, we find that 'inter' means between as opposed to 'intra' which means 'within'. Interpersonal communication therefore, is communication between more than one person. It can be argued that there is more than one 'self' in an individual and that an intrapersonal transaction actually involves subconscious interactions between two phases of perceptions and experiences of the individual. However, a review of our communication activities for a normal day would underscore the fact that we spend most of our time communicating at the interpersonal level. We do need the other person for indeed "no man is an island," or as John Keltner puts it, "no human infant could survive without other people, and no member of Homo sapiens develops into a human being unless he experiences interactions with human beings. Each of us has identity in relation to mankind."¹ Interpersonal Communication, therefore, which involves two or more persons communicating directly within a relatively informal dyadic (two-person) or small-group setting has been and will continue to be a vital area of study.

The basic elements needed to complete the cycle of interpersonal communication are sender, message and receiver and the ensuing transaction must take place in a people-oriented context. Effective transmission does not and cannot materialize until the message is received and responded to. Stewart Tubbs and Sylvia Moss illustrate this point well with the example of the drowning man who hails frantically for help to one of his friends in a sailboat only to have his friend wave back casually.² In similar vein, Robert C. King puts his reader on a plane which has crashed on a desert island in the Pacific Ocean. As the sole survivor of the crash you (the reader) try to attract the attention of passing aircraft and ships in order to get help. Your calls and signals are neither heard nor seen.³

There is, then, constant reciprocal transaction and interaction in effective interpersonal communication. Dyadic communication is the basic, social unit of communication which can take place between two people. Transactions at this level could take the forms of a conversation, dialogue, debate, encounter or interview. What is a transaction? In a transactional perspective each individual is simultaneously a sender and a receiver. The interactional perspective on the other hand goes several stages further to study the relationship between the speaker and the listener and the way this relationship affects communication. It would be ideal to inject an active element of interaction into every speaking situation but limitations bombard us from several angles. Interaction summons up energy, flexibility and sensitivity, and few people are willing to pay this price for a fruitful, rewarding communication experience. Besides, even the willing few are hindered in their quest for excellence because of a non-mutual partner. Nat Hentoff in his book **Jazz Country** tells how a blind musician, Big Charlie, cautions a young musician to look beneath and beyond the surface of what people say and do for new themes for his

music. Big Charlie explains for example, that the man with the flat voice and big words has no faith left in himself and could therefore, do nobody any good. He further emphasizes that the way people laugh and the tone they use reveal the measure of sincerity and empathy they possess. David Berlo defines empathy aptly when he says, "when two people interact, they put themselves into each other's shoes...Interaction involves reciprocal notetaking, the mutual employment of empathic skills."⁴ Very often our ego comes to the fore as we communicate and we even strive to impose our ideas on the other person; we are loath to interact and allow the conversation to affect our thoughts and behavior patterns.

Let us examine some specific areas of dyadic communication. At the conversational level, for example, the purpose of communication is primarily for entertainment and the time limit could vary from a one-minute greeting to a lengthy exchange of several hours. Here the amount of pleasure derived on both sides would depend on how genuine the inter-flow of faith, confidence and trust is between the parties involved. Dialogue is akin to conversation but it is less casual and more meaningful than its counterpart. This level of communication is regarded as the core of the human communication experience. The combination of intimacy and empathy involved in dialogue makes it the major vehicle for enhancing the humane qualities of an individual. R. Wayne Pace in **Techniques for Effective Communication** says that "Dialogue is that type of person-to-person communication in which the deepest, most intimate, and most personal relationships are formed...The ultimate test of dialogue is the ability of both partners to continue to listen and respond to each other when differences develop."⁵

In structure and format, the interview differs from the dialogue and conversation. It can be likened to the debate for in both these areas the roles of the participants interact at two important levels of communication, effective listening and rapport establishment. At this stage, transaction will depend on the type and purpose of the interview. Some people mistakenly associate interview with a job situation but there are other kinds of interviews, for example the appraisal, the counseling, the gathering information and the solving a problem interview. An interview, therefore, has purpose and is governed by some specific principles. Friendship and cordiality in a warm atmosphere will produce rapport. In addition, some of the questions we could ask ourselves if we wish to communicate effectively at this interpersonal level would be, Are we committed to interacting with the other person? Are we sensitive to our own feelings? Can we see the other man's proposition and view it in an unbiased manner? There is no denying that our feelings of self-esteem and self-acceptance will determine the quality of our acceptance of others.

The individual only has to cope with self and the other person in dyadic communication but his role becomes more complex when he functions in a group situation. Individuals tend to lean in the direction of the majority vote in spite of their own personal convictions. This autokinetic effect, as it is called, measures not only the conformity factor but also the effect of peer-pressure on conformity. Steward Tubbs and Sylvia Moss illustrate the interplay of group influence with the example of the student who in spite of the darkness outside

and her tired feelings begins preparing for class because her alarm clock is saying 8:15 a.m., her roommate is dressed and almost ready to leave for class and everything and everyone around her presents a picture of regular morning activity. Actually her friends had turned the clock from 1:15 to 8:15 and were acting out all the morning chores.⁶ This same unreasoned behavior pattern is transferred to group communication deliberations.

A group can be manipulated into thinking like its leader, for example, in Shakespeare's **Julius Caesar** Anthony's swaying of the crowd after Caesar's death. Hence firm leadership is advocated but here again the leader must be able to actively interact with all members of the group. Additional factors which complement leadership are size of group and communication forms of reference. Much has been written about the size of a group and the range among scholars varies from three to twenty. The latter number is unwieldy if consideration is to be given to individual input. However, seven seems to be the ideal number but here again the ceiling will depend on the kind of group and the time at its disposal. John Cragan and David Wright have blended the above characteristics into a workable definition of small-group communication. They say that "A small group is a few people engaged in communication interaction over (a period of) time, generally in face-to-face settings, who have common goals and norms, and have developed a communication pattern for meeting their goals in an interdependent fashion."⁷

Theory takes on full meaning when practiced. This statement is especially true in the study of communication at the interpersonal level. The individual has to become involved in order to experience trust, for example, the effect of language, conflict, leadership qualities or flexibility. In other words, a working communication vocabulary is an asset but experiencing the transactional and interactional aspects of the vocabulary complete the communication cycle. For example, artifacts which constitute one segment of nonverbal communication will take on an abundance of meaning after the interview when the interviewee realizes that he did not succeed because he was unkempt. Again, consider the lack of trust in a member of a group who withholds vital information because of an innate fear of not getting credit for it. The turning down of a six-million dollar funding project could serve to snap him out of his self-complacency.

At all levels interpersonal communication is circular; that is, there is a continuous interaction in which individuals take turns at being the source and the reviewer. However, interpersonal communication is transactional rather than interactional; but where the accent is put will depend on the content of the communication, the time factor, how well the parties know each other, and how honest and empathic the parties will allow themselves to be. In short, the entire process encompasses a genuine, all-around interflow of faith, confidence and trust. The closer the link between the stimulus as intended and the stimulus as received and reacted to, the greater the effectiveness of the communication. The interpersonal level of communication goes beyond the intrapersonal level to include two or more people in face-to-face interaction in both dyadic and small group settings. Regardless of which perspective is adopted, transactional or interactional, or a combination of both, feedback is an important ingredient in the process of interpersonal communication for it allows the individuals involved to monitor and evaluate the success of their

exchange. Optimum success will hinge on minimum conflict in any relationship. I would like to pose a proposition from Shakespeare's *As You Like It* and to answer it from his *Hamlet* as an axiom for effective interpersonal communication. Since "all the world's a stage and all the men and women merely players," with "exits" and "entrances"⁸ it would be exemplary to heed Polonius' advice to Laertes and be true to ourselves for then "thou canst not be false to any man."⁹

FOOTNOTES

¹John W. Keltner, *Interacting with Others: Face to Face in a Small Group*. In Jean M. Civikly (ed.) *Messages: A Reader in Human Communication*. New York: Random House, 1974, p. 165.

²Steward L. Tubbs and Sylvia Moss, *Human communications: An interpersonal perspective*. New York: Random House, 1974, p. 9.

³Robert G. King, *Fundamentals of human communication*. New York: Macmillan Pub. Co., Inc., 1979, p. 10.

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⁵R. Wayne Pace, Brent D. Peterson and M. Dallas Burnett *Techniques for effective communication*. Philippines: Addison-Wesley Publishing Co., Inc., 1979, p. 27.

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⁷John F. Cragon and David W. Wright, *Communication in small group discussions*. Minnesota: West Publishing Co., 1980, p. 15.

⁸William Shakespeare, *As you like it* Act II, Sc.vii. LL 139-141.

⁹William Shakespeare, *Hamlet* Act I, Sc.iii. LL 78-80.

A NEOCLASSICAL GROWTH-THEORETIC ANALYSIS OF INCIDENCE OF THE VALUE ADDED TAX

Satyendra Dutt

ABSTRACT

The paper is designed to investigate the long-run incidence effects of the value added tax in a neoclassical growth model. Attention has been centered on the specific question of how the functional distribution of income would be affected by the introduction of a value added tax into the economy.

It is found that change in tax structure from a personal and corporation income tax system to a value added tax will result in an increase in the level of national product as well as net rate of return on capital. However, the net wage rate will decrease due to this tax change. This implies that the adoption of a value added tax will increase the degree of income inequality in the long run.

INTRODUCTION

This investigation seeks to delineate, within a neoclassical growth-theoretic framework, the long-term incidence effects of the value added tax with particular emphasis on its distributive effects on income. Successful as the major sales tax of the European Economic Community, the valued added tax offers much promise for both developed and developing economies even though its implementation will rely on careful investigation.

In the long-run, the stock of capital at any given point of time being dependent on the past time path of savings which, in turn, is affected by the functional distribution of income and propensities to save, an appropriate tax policy can be adopted with a view to changing the time path of output through change in the tax structure. Under the assumption of linear homogeneity of the production function, gross factor returns being a function of capital-labor ratio alone, the effect of a change in the tax structure on the capital accumulation may have a feedback effect on the functional distribution of income through the mechanism of the growth model presented hereinafter. This paper addresses itself to the problem of how the functional distribution of income would be affected by a change in the tax structure from a personal and corporate income tax system to a value added tax.

THE MODEL

We will confine our analysis to a macroeconomic model in which the economy produces only one homogeneous good which may serve either as a consumption good or as an investment good. This good is produced through the use of two factors of production, labor (L) and capital (K). It is assumed that the production function for the economy as a whole possesses all neoclassical properties¹, among which are strict quasiconcavity and linear homogeneity. The perfect competition prevails in both product and factors markets. Both productive factors are fully employed at all times. It is also assumed that the economy is closed; that is, the economy involves no foreign trade or international capital movements. The government budget is continuously balanced, and is held constant as a proportion of the national income.

Furthermore, the government expenditure consists of current consumption only, therefore, the capital stock is entirely owned by the private sector. Government expenditures are neutral in the sense that the expenditures benefit capital and labor equally. All enterprises are organized in corporate form. Finally, it is assumed that technical progress is Harrod-neutral.

Under this set of assumptions, the theoretical framework of the economy used in this paper can be described by the following system of equations.

The production function is designated as

$$(1) Y = F(K, L); K > 0, L > 0$$

where Y is national product, which is a function of the quantities of capital and labor used in production. Both capital and labor are necessary for production.

By the use of Euler's theorem², it can be shown that the production function (1) is equal to gross factor incomes; i.e.

$$(2) Y = wL + rK$$

where w, r are the competitive gross wage and rental rate respectively. This identity will be adopted for simplicity throughout the whole analysis in the present paper.

Under the assumption of linear homogeneity of the production function, it can be shown that per capita output is a function of the capital-labor ratio only³; i.e.

$$(3) y = f(k)$$

where $y = Y/L$, is per capita output and $k = K/L$, is the capital-labor ratio. Equation (3) is the intensive form of the production function.

In order to ensure the existence of a meaningful balanced growth path and a stable equilibrium, it is assumed that the Inada conditions must hold at all times⁵.

Since perfect competition prevails in both factors markets, the gross wage and rental rate are equal to the marginal physical products of labor and capital respectively. Under the assumption of linear homogeneity, both gross wage and rental rate can be expressed as functions of the capital-labor ratio alone⁶.

$$(4) w = f(k) - kf'(k)$$

$$(5) r = f'(k)$$

Suppose a personal and corporation income tax system is imposed upon the economy, then the net wage and rental rate become:

$$(6) w' = (1 - t_w)[f(k) - kf'(k)]$$

$$(7) r' = (1 - t_r)f'(k)$$

where t_w and t_r are the tax rates on wage and rental incomes respectively, and w' and r' are the net wage and rental rates, respectively, under the income tax system. We assume that $t_r > t_w$.

It has been assumed that the government budget is continuously balanced and is held constant as a proportion of the national income. Thus, the total tax revenue must be equal to θY , the government budget. This leads to the following equation:

$$(8) T' = \theta Y = t_w wL + t_r rK \\ = t_w [f(k) - kf'(k)]L + t_r f'(k)K$$

where T' is the total tax revenue under the income tax system, and θ is the constant proportion. Dividing both sides by L , equation (8) becomes

$$(9) \theta f(k) = t_w \{f(k) - kf'(k)\} + t_r kf'(k) \\ = t_w f(k) + (t_r - t_w)kf'(k)$$

In a neoclassical growth model, labor is assumed to be supplied inelastically and to grow exponentially at a constant rate n . The supply of labor at a given time is

$$(10) L = L_0 e^{nt}$$

where L_0 is the initial quantity of labor; and t is the continuous time variable. The labor growth rate is thus given as

$$(11) \hat{L} = \dot{L}/L = n$$

where \hat{L} is the labor growth rate; and $\dot{L} = \frac{dL}{dt}$, the derivative of labor with respect to time.

It is assumed that a constant fraction, s , of after-tax national income is saved. Letting s_w and s_r denote, respectively, the savings propensities of labor and capital, we have

$$(12) S = s_w w' L + s_r r' K \\ = s_w (1 - t_w)[f(k) - kf'(k)]L + s_r (1 - t_r) f'(k)K$$

where S is the total saving of the economy. s_w and s_r are not necessarily identical.

Assuming that desired saving in the economy is always realized, then the equilibrium condition is

$$(13) S = I$$

where I is investment.

It is moreover assumed that capital does not depreciate, capital accumulation is thus given by the equation:

$$(14) \dot{K} = I = S \text{ or } \dot{K} = S$$

where $\dot{K} = \frac{dK}{dt}$ time rate of change of the capital stock.

From equations (12) and (14) we get

$$(15) \dot{K} = s_w (1 - t_w)[f(k) - kf'(k)]L + s_r (1 - t_r) f'(k)K$$

Dividing both sides by K , equation (15) becomes:

$$(16) \hat{K} = s_w (1 - t_w)[f(k) - kf'(k)] \frac{1}{k} + s_r (1 - t_r) f'(k)$$

where $\hat{K} = \dot{K}/K$, is the growth rate of the capital stock, or the rate of capital accumulation.

On the full employment steady-state equilibrium growth path, the labor growth rate will equal the growth rate of the capital stock with a fixed capital-labor ratio. That is

$$(17) \hat{L} = \hat{K}$$

From equation (11), (16) and (17) we get:

$$(18) \quad n = s_w(1 - t_w)[f(k) - kf'(k)]\frac{1}{k} + s_r(1 - t_r)f'(k)$$

$$\text{or } nk = s_w(1 - t_w)[f(k) - kf'(k)] + s_r(1 - t_r)kf'(k)$$

Equations (6), (7), (9), and (18) comprise a complete neoclassical growth model with an income tax system. The changes in the tax structure may alter the growth path. Since the returns on the factors of production are functions of the capital-labor ratio, the changes in the tax structure may have some distributional impacts on the economy.

In order to investigate the distributional impacts of a change in the tax structure on the economy, we will make use of a value added tax as an alternative to the income tax system, while keeping the total tax revenue unchanged. This is Musgrave's concept of "differential incidence," which requires the comparison of taxes with equal yield⁷.

Suppose that the income tax system is repealed, instead we impose a value added tax on the economy, then the net wage and rental rates become:

$$(19) \quad w'' = (1 - t_y)[f(k) - kf'(k)]$$

$$(20) \quad r'' = (1 - t_y)f'(k)$$

where t_y is the value added tax rate. The total tax revenue is

$$(21) \quad T'' = t_y w''L + t_y r''K = t_y Y$$

where T'' is the total tax revenue under the value added tax. By the use of "differential incidence" concept and the assumption of balanced budget, we obtain

$$(22) \quad T' = T'' = 0Y$$

From equations (21) and (22) we get

$$(23) \quad t_y = 0$$

Equation (23) implies that the value added tax is a tax imposed proportionately on the national income.

From equations (8), (22), and (23), it is obvious that if $t_r = t_w$, then $t_r = t_w = t_y = 0$. This is to say that if the tax rate on the rental income equals that on wage income and the government budget is held constant as a proportion of the national income, then the income tax system is exactly the same as a value added tax. The value added tax may be considered as a special form of income tax. In this model, therefore, the replacement of the income tax system by a value added tax is equivalent to the lowering of the income tax system by a value added tax is equivalent to the lowering of the corporate tax rate to the level at which $t_r = t_w = 0$. Thus, investigation of the differential incidence effects of substituting a value added tax for the income tax system is equivalent to examining the distributional impacts of lowering the corporate tax rate to the level at which $t_r = t_w = 0$.

DETERMINATION OF THE INCIDENCE EFFECTS OF THE VALUE ADDED TAX

It has been shown in the foregoing that if a uniform tax rate is imposed on

wage income and on corporate income, and the total tax revenue is held constant as a proportion of the national income, then the income tax system is equivalent to the value added tax. Therefore, determination of the differential incidence effects of the value added tax becomes a problem of determining the effects of lowering t_r and raising t_w while maintaining the government budget constant as a proportion of the national income.

This problem will be analyzed within the context of a neo-classical growth model. Since analysis of neoclassical growth theory has demonstrated that growth paths converge to a balanced growth path, we are able to use a full employment growth model in which the equilibrium path of the economy is stable before and after changes in the tax structure. Our economy will thus move from one stable equilibrium growth path to another in which the capital-labor ratio will presumably be different while the labor growth rate will be the same. We will neglect the time path of the adjustment process make mathematical manipulation more manageable. In other words, we will just compare the two economies at the same point in time after all equilibrating adjustments of tax changes have worked themselves out. This will allow us to employ a method of comparative static analysis.

The model is presented as follows:

$$(6) \quad w' = (1 - t_w)[f(k) - kf'(k)]$$

$$(7) \quad r' = (1 - t_r)f'(k)$$

$$(9) \quad 0f(k) = t_w[f(k) - kf'(k)] + t_r kf'(k)$$

$$(18) \quad nk = s_w(1 - t_w)[f(k) - kf'(k)] + s_r(1 - t_r)kf'(k)$$

Differentiating equations (6), (7), (9), and (18) with respect to t_r and using Cramer's rule to solve these simultaneous equations we obtain:

$$(24) \quad \frac{dk}{dt_r} = \frac{(s_w - s_r)f'(k)}{D}$$

$$(25) \quad \frac{dr'}{dt_r} = \frac{\frac{s_w}{2} f'(k)}{D} \{ (t_r - 0)Kf'(k) - (1 - t_w)[f(k) - kf'(k)] \}$$

$$(26) \quad \frac{dw'}{dt_r} = \frac{\frac{1}{k} f'(k)}{D} \{ s_w(1 - t_w)[f(k) - kf'(k)] - s_r(t_r - 0)kf'(k) \}$$

$$\text{where } D = -s_r(1 - t_r)f'(k) + \frac{s_w}{k} \{ kf''(k) + \frac{f(k)}{k} - f'(k) \} + 0f'(k) - \frac{0f(k)}{k} - t_r kf''(k)$$

Based on equations (24), (25), and (26), we are able to evaluate qualitatively the effects of a change in t_r on k , r' and w' ; or equivalently, we can determine

the differential incidence of the value added tax under the assumptions postulated in the foregoing.

Equation (24) tells us the effect of a change in t_r on the capital-labor ratio. It has been proven that the denominator D is guaranteed positive by the requirement of stability. Thus stability is a sufficient condition for a positive denominator. We assume that the marginal propensity to save from rental income exceeds that from wage income; that is, $s_r > s_w$. Therefore, the numerator is negative. Then we have

$$(27) \frac{dk}{dt_r} < 0 \text{ if } s_w < s_r.$$

Statement (27) means that the equilibrium capital-labor ratio will be raised by lowering the tax rate on rental income whenever the propensity to save out of rental income is greater than the propensity to save out of wages. This is equivalent to saying that, given the assumptions of s_w , s_r and balanced government budget as a constant proportion of the national income, when we replace the income tax system by a value added tax, the capital-labor ratio will rise. This implies that, given the constant labor growth rate, this change in the tax structure will increase the time rate of change of the capital stock. Therefore, we conclude that the adoption of the value added tax will expedite capital formation.

Let us now examine equation (25), which tells us the effect of a change in t_r on the net rate of return on capital.

Under the previous assumptions, $t_r = t_w = 0$, thus the first term in the brackets vanishes. It has been assumed that both inputs are necessary for production, i.e. $K > 0$, $L > 0$. Using the property that $\frac{\partial F}{\partial L} > 0$ on the interior of R_+^2 , we know that $[f(k) - kf'(k)] = \frac{\partial F}{\partial L} > 0$. Thus we get

$$(28) \frac{dr'}{dt_r} < 0.$$

Therefore, lowering the tax rate on rental income to the level at which $t_r = t_w = 0$ always raises the net rate of return to capital. As a result, capitalists benefit from a change in the tax structure from income taxes to the value added tax.

Finally, we will devote ourselves to investigating equation (26), which tells us the effect of a change in t_r on the wage rate net of tax. This effect is the central issue of the argument about the differential incidence of the value added tax and the most difficult to identify, deserving our special attention.

Since $t_r = t_w = 0$, the second term in the brackets vanishes. Furthermore,

$$[f(k) - kf'(k)] = \frac{\partial F}{\partial L} > 0. \text{ Thus we have}$$

$$(29) \frac{dw'}{dt_r} > 0.$$

Statement (29) reveals that lowering the tax rate on the rental income will decrease the wage rate net of tax. Therefore, the adoption of the value added tax will hurt labor.

From statement (27), the adoption of a value added tax (equivalent to lowering t_r) will give rise to a higher capital-labor ratio, which in turn will increase the long-run net wage, since the net wage w' is a function of the capital-labor ratio. However, from statement (29), the adoption of a value added tax will decrease the net wage in the long run. Intuitively, these two statements seem to contradict each other. We will proceed further to clear the mist and to reconcile these two statements.

We know that $w' = (1 - t_w)[f(k) - kf'(k)]$. By assumption and statement (27), both t_w and k are affected by t_r . Thus, implicitly, we may write $w' = [w'(t_r), k(t_r)]$. Therefore

$$\frac{dw'}{dt_r} = \frac{\partial w'}{\partial t_w} \frac{dt_w}{dt_r} + \frac{\partial w'}{\partial k} \frac{dk}{dt_r}$$

The first term on the right side of the equation (30) will be called the tax substitution effect, indicating the effect of a change in t_r on w' through a change in t_w . The second term will be designated the growth effect, telling us what effect changing t_r will have on the net wage through a change in the capital-labor ratio.

Since it is assumed that the total tax revenue is held constant as a proportion of the national income, we have to raise t_w while lowering t_r . Therefore, based

on equation (9) we can show that $\frac{dt_w}{dt_r} < 0$. In addition, it can easily be shown that $\frac{\partial w'}{\partial t_w} < 0$. Thus the "tax-substitution effect," $\frac{\partial w'}{\partial t_w} \frac{dt_w}{dt_r}$, is positive. The "growth effect," $\frac{\partial w'}{\partial k} \frac{dk}{dt_r}$, is negative because $\frac{\partial w'}{\partial k} = -(1 - t_w)kf''(k) > 0$ but by statement (27) $\frac{dk}{dt_r} < 0$.

The total effect, $\frac{dw'}{dt_r}$, is the sum of these two effects. If the "tax-substitution effect" exceeds the "growth effect," then $\frac{dw'}{dt_r} > 0$; otherwise $\frac{dw'}{dt_r} \leq 0$. The statement (29) implies that the tax-substitution effect exceeds the growth effect.

CONCLUSIONS AND POLICY IMPLICATIONS

Important results emerging from this study indicate that a change in the tax structure from an income tax system to a value added tax will raise the capital-labor ratio, which in turn will increase the level of national product and the rate of return to capital. However, since this tax change will decrease the net wage rate, it can be concluded that substitution of a value added tax for an income tax will increase the degree of income inequality in the long run. This adverse distributional impact was an important factor underlying the Richardson Committee's unfavorable report on the value added tax. Though evaluation of incidence effects is important for any meaningful evaluation of a

tax structure, some other effects may be of paramount importance for the decision whether to replace the income tax system by a value added tax. The weight attached to each effect will depend upon the policy goals which the government is trying to achieve.

As delineated in the foregoing, the value added tax is more efficacious than the income taxes for attaining the policy goal of accelerating economic growth. A positive effect of the value added tax on capital formation may be attractive to the developing nations in which the capital needed for economic development is scarce. They might expedite economic growth at the expense of labor's welfare.

FOOTNOTES

1. The neoclassical theory of production postulates the following assumptions on the production function:

- (1) F is continuous;
- (2) There exist $\frac{\partial F}{\partial K}$, $\frac{\partial F}{\partial L}$, $\frac{\partial^2 F}{\partial K^2}$, $\frac{\partial^2 F}{\partial L^2}$, $\frac{\partial^2 F}{\partial K \partial L}$;
- (3) $F(0, L) = 0$ if $L > 0$, $F(K, 0) = 0$ if $K > 0$, which imply $F(0, 0) = 0$;
- (4) F is linear homogeneous;
- (5) F is strictly quasi-concave;
- (6) $\frac{\partial F}{\partial K} > 0$, $\frac{\partial F}{\partial L} > 0$, $\frac{\partial^2 F}{\partial K^2} < 0$, $\frac{\partial^2 F}{\partial L^2} < 0$.

See, for example, E. Burmeister and A. R. Dobell, *Mathematical Theories of Economic Growth* (New York: The Macmillan Company, 1970).

2. Euler's theorem says that if $Y = F(K, L)$ is homogeneous of degree m , then

$$K \frac{\partial F}{\partial K} + L \frac{\partial F}{\partial L} = mY$$

In this paper, we assume the production function is homogeneous of degree one, therefore

$$K \frac{\partial F}{\partial K} + L \frac{\partial F}{\partial L} = Y$$

or

$$Y = rK + wL$$

See, for example, K. C. Kogiku, *Microeconomic Models* (New York: Harper & Row Publishers, 1971), p. 241.

3. If the production function $Y = F(K, L)$ is homogeneous of degree one, then $\lambda Y = F(\lambda K, \lambda L)$. Let $\lambda = \frac{1}{L}$, then $\frac{Y}{L} = F\left(\frac{K}{L}, 1\right)$. Let $y = \frac{Y}{L}$ and $k = \frac{K}{L}$, then we can rewrite the production function as $y = f(k)$.

4. K. Inada specifies a set of conditions that guarantee the existence,

uniqueness, and stability of the balanced growth capital-labor ratio. These conditions are:

- (1) $f'(k) > 0$;
- (2) $f''(k) < 0$;
- (3) $f'(0) = \infty$;
- (4) $f'(\infty) = 0$;
- (5) $f(0) = 0$;
- (6) $f(\infty) = \infty$;

See, for example, Henry Y. Wan, Jr., *Economic Growth* (New York: Harcourt Brace Jovanovich, Inc., 1971), pp. 37-38.

5. In the growth theory, balanced growth is defined as the proportional increase of output and all inputs.

$$w = \frac{\partial Y}{\partial L} = \frac{\partial}{\partial L}[Lf(k)] = f(k) + Lf'(k) \left[-\frac{K}{L^2}\right] \\ = f(k) - kf'(k)$$

$$r = \frac{\partial Y}{\partial K} = \frac{\partial}{\partial K}[Lf(k)] = Lf'(k) \frac{1}{L} = f'(k)$$

7. Richard Musgrave, *The Theory of Public Finance* (New York: McGraw-Hill Book Company, 1959), p. 212.

8. A. A. Tait, *Value Added Tax* (London: McGraw-Hill Book Company, 1972), Chapter 1.

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AN ANECDOTAL CHRONOLOGY OF SELECTED HIGHLIGHTS IN THE HISTORY OF AMERICAN THEATRE AND ENTERTAINMENT: 1698-1981

Anne Hudson Jenkins

In the United States, professional theatre is more than three hundred years old. There is evidence that in the late 1660's despite the working conditions, the hardship of life, the laws against presenting and acting in plays, the difficulties and dangers of "on-the-road" travel, and the almost nonexistent methods of communication in pre-revolutionary colonial times, small groups of show business pioneers created theatre.

Before the Civil War and "Abe" Lincoln's murder, the acting profession in America, like the theatre of Oliver Cromwell's puritanical reign in England, was held in very low repute. After the Civil War, theatre and vaudeville blossomed and peaked, and Thomas Alva Edison became the "Father" of film by inventing the phonograph.

Legitimate theatre in America grew just as the nation grew. In the theatre, as in American life, generally, American playwrights of African ancestry were relatively unknown and slow to emerge. Slavery, racial injustices, and lack of opportunity restricted black writers far more severely than in any other literary fields.

With few exceptions, the black characters as portrayed by white American authors of the eighteenth century were either the "contented" slave or the medium to provide comic relief. The minstrel shows of the 1840's highlighted, sustained, and climaxed the stereotypes of the "buffoon" and "contented" slave.

It wasn't until Harriet Beecher Stowe's **Uncle Tom's Cabin** was adapted for the stage by George Aiken was there a significant attempt to sympathize with the plight of the black character. The popular reception of Aiken's adaptation, and those of others, prompted both positive and negative imitations of the same theme. In such an atmosphere, the first protest play, an autobiography of the black American playwright, William Wells Brown, **The Escape: or A Leap to Freedom** (1858) was written.

By 1917, white playwrights attempted to present a less calumnious picture of black life on stage. Thus, a new folk drama was created. Dorothy and DuBose Heyward, Eugene O'Neill, Edward Shelton, and Paul Green were only a few of the playwrights who pioneered in this area. To date, anyone desiring to explore plays dealing with early black life and folklore is usually referred to these authors.

No doubt, the integrity of the intentions of these playwrights was forthright and unquestionable, but more often than not, they lacked a true knowledge of the black experience. Despite that, these white playwrights were produced. Paradoxically, except for a few scattered presentations in black churches, high schools, colleges, and community theatres, a surprising number of black playwrights who were relating a truer black experience were virtually being ignored and going unproduced.

When black dramatists did begin to write, their plays were rarely, if ever, produced, and only a very few were published no matter what quality the work. No African-American had a full-length play produced in a Broadway

theatre until Garland Anderson's **Appearances** (originally entitled: **Don't Judge By Appearances**) was produced at the Frolic Theatre in 1925 with a run of twenty-three performances, and again at the Hudson Theatre in 1929 with twenty-four performances.

Three decades later, only ten additional theatrical presentations written either partly or totally by black Americans were produced until Lorraine Hansberry's **A Raisin in the Sun** began the longest Broadway run of a play authored by a black American female.

By the late 1950's, a new generation of black playwrights began to emerge. Their efforts, along with the discovery that "Black was beautiful" in music, art, dance, history, and literature emphatically altered the direction of the arts in America.

The dearth of black writers of plays cannot be attributed to the excuse that Afro-Americans lacked literary talent because Afro-Americans earned fame nationally and internationally before and since 1920 in other fields of letters (e.g., Wheatley, Dunbar, Douglass, DuBois, Hughes, Wright, etc.). Rather, the shortage of black American playwrights must be blamed on a combination of economic, cultural, and social circumstances. The lack of opportunity for recognition has been the force restricting the black playwright.

What follows is an "Anecdotal Chronology of Selected Highlights in the History of American Theatre and Entertainment," which provides a concise, comprehensive description of the contributions of Black Theatre as a medium of intercultural communication.

An Anecdotal Chronology of Selected Highlights in the History of American Theatre and Entertainment

Part One - 1698-1898

- 1698 - First song book containing some non-religious songs is published in America.
- 1702 - The earliest documented evidence of professional theatrical activity in New York is that of English actor, Anthony Aston, also known as Mat Medley.
- 1716 - First professional theatre is built by William Levingston in Williamsburg, Virginia. The theatre, an all-purpose entertainment center complete with bowling alley, was run by Charles and Mary Stagg, proprietors of a dancing school.
- 1732 - **The Recruiting Officer** by George Farquhar, is presented at the "New" Theatre in New York. It is the earliest documented record of a play performed by professional actors in North America.
- 1750 - A law banning a theatrical performance of any kind is enacted by Massachusetts. Although theatre is popular in the South, northern colonies frown on drama, condemning it as "immoral."

- 1752 - The Hallam London Company, headed by actor-manager Lewis Hallam, arrives in U.S. from England and opens at the Williamsburg Theatre, Virginia, with the **Merchant of Venice**. They are America's first popular theatrical troupe.
- 1759 - Pennsylvania passes law calling for a five hundred pound fine for anyone presenting or acting in a play.
- 1761 - Lewis Hallam, Jr., at age twenty-one, who later becomes as famous an actor-manager as his father, is America's first Hamlet.
- 1767 - Three of the most prominent theatrical personalities of the day - David Douglass, Lewis Hallam, Jr., and John Henry - form a company to produce plays for the John Street Theatre and other houses. John Henry, a young Irish actor, becomes America's first matinee idol.
- Prince of Parthia**, first drama written by a native-born American, Thomas Godfrey, and performed by professionals is played by David Douglass' company at the Southwark Theatre in Philadelphia.
- Black characters appear in American dramas with "Racoon" in Andrew Barton's (Thomas Forrest's) **The Disappointment** or **The Force of Credulity**.
- 1775 - The British reopen theatres in Boston. During the Revolution, from about 1775 to 1783, the American stage is under the full control of the British military. British General Burgoyne is an avid amateur actor and playwright.
- 1787 - **The Contrast**, first comedy written by an American, Royall Tyler, and acted by professionals, is presented by the American Company at the John Street Theatre in New York City.
- 1807 - Ira Aldridge born in New York. He becomes the first international Negro star.
- 1809 - A Miss Arnold appears with her husband, David Poe, in **Castle Spectre** at a Boston Theatre. Earlier in the year their son, Edgar Allen was born. The inventor of the detective story will work as a theatre critic for the **Broadway Journal** in the 1840's.
- 1821 - Junius Brutus Booth, father of Edwin and John Wilkes arrives in America for the first time. He appears as "Richard III" at the Park Theatre in New York.
- The African Grove Company, under the direction of James Hewlett, performs Shakespeare in Manhattan at the corner of Bleeker and Mercer Streets. The African Company is the first American Negro drama group.
- James Hewlett performed "Richard III" as part of the African Company's repertoire. He is the first Afro-American to play "Othello."
- 1828 - Two black men--known only as "Old Corn Meal" and Picayune Butler--are credited by some historians with originating minstrelsy in America.

- 1829 - The Negro tragedian, Ira Aldridge, oftentimes referred to as the celebrated "African Roscius" (after the famous actor of ancient Rome) plays opposite Edmund Kean in **Oroonoko**, or the **Royal Slave**.
- 1833 - Ira Aldridge successfully performs **Othello** at Covent Garden and tours the provincial theatres of the British Isles. Together, Edmund Kean playing "Iago" opposite the American-born black actor's "Othello", tour England and the continent. Aldridge settles abroad because he can not perform in his native country where blacks are still regulated to minor--if any--roles.
- 1843 - "The Virginia Minstrels" becomes the first blackface show to open in the Bowery in New York headed by Dan Emmett of "Dixie" and "Jump Jim Crow" fame.
- 1844 - The original Virginia Minstrels took to Glasgow their "true copy of the ups and downs of Negro life."
- 1853 - The Howard family stages the first performance of Harriet Beecher Stowe's **Uncle Tom's Cabin** in Troy, New York. The principle actors are customarily all white, including those who play "Uncle Tom" and "Topsy."

The **New York Herald** announces:

NATIONAL THEATRE - TO COLORED PEOPLE: NOTICE — On and after Monday, August 15, a neat and comfortable parquette will be prepared in the lower part of the theatre for the accommodation of RESPECTABLE COLORED PERSONS desirous of attending the great drama of **UNCLE TOM'S CABIN** the front seats of which will be reserved for females accompanied by males, and no female admitted unless with company.

- 1854 - James Bland is born "free." He becomes a famous composer and minstrel performer. He composes the song, "Carry Me Back To Old Virginny" for the famous white minstrel, George Primrose.
- 1865 - A Negro, Charles Hicks, organizes the "Georgia Minstrels," a colored company that becomes so successful it soon is taken over by a white manager, Charles Callendar. After a highly lucrative tour in the U.S., the show goes abroad under the name of Haverly's European Minstrels. James Bland joins the "Callender's Consolidated Spectacular Color Minstrels" just before that troupe sails for London.
- 1867 - Ira Aldridge, loaded with honors: the Order of Chavalier conferred by the King of Prussia, the Cross of Leopold by the Czar of Russia, the Golden Order of Service from the Royal House of Saxony, -- dies in Poland.
- 1875 - Egbert "Bert" Austin Williams of whom W. C. Fields once said "Bert Williams is the funniest man I ever saw" is born in Antigua, British West Indies. He grows up in San Francisco, where he teams up with Kansasite, George Walker.

- 1877 - Sam Lucas, a famed Negro minstrel, is the first "real" Negro to play "Uncle Tom" in Richmond, Kentucky.
- 1878 - Charles Gilpin is born. By 1916 he becomes a renowned actor and director of the Lafayette Theatre Company.
- 1891 - **The Creole Show**, a Negro revue-type production, plays a full season in Chicago during the World's Fair. It is the first Negro company to use singing and dancing girls.
- 1892 - Sissieretta Jones begins her career as a concert singer. She is signed for roles in **Aida** and **L'Africaine**, but it is never carried through. Instead a show conceived by Bob Cole, **Black Patti's Troubadors** is built around Miss Jones.
- 1896 - The first all-Negro company performs **Oriental America** on Broadway.
Bert Williams and George Walker introduce the "Cakewalk" to the stage.
- 1898 - The first all-Negro musical comedy produced, conceived, directed and managed entirely by Negroes is Bob Cole's **A Trip to Coontown**. At first, these Negro musicals are called "coon shows" in contrast to the minstrels and "Tom" shows. But they lay the groundwork for the public acceptance of Negro women and Negro males on stage in other than burlesque fashion.
With the famous poet, Paul Lawrence Dunbar, Will Marion Cook, notable musical comedy composer, writes **Clorindy--The Origin of the Cakewalk**, a black revue, based on ragtime and dance routines.

Part Two - 1901-1949

- 1901 - New York is number one theatre city with forty-one legitimate playhouses, a world record.
- 1902 - **In Dahomey** opens in Times Square with Williams and Walker.
- 1903 - The opening of two of Broadway's most tenacious musicals, **The Wizard of Oz** and **Babes in Toyland**.
Scott Joplin writes the first ragtime opera, **A Guest of Honor**.
- 1910 - Bert Williams becomes a star in the Ziegfeld Follies.
- 1914 - The Lafayette Stock Company opens in Harlem.
- 1915 - The Provincetown Players are organized in Cape Cod, Massachusetts, and are first to present the works of Eugene O'Neill. In 1916 they move to Macdougall Street in New York; and retain original name..
The Gilpin Players, now known as Cleveland's Karamu Theatre, is founded by two Oberlin College graduates, Russell and Rowene Jelliffe. Over the years, Karamu produces almost every play concerned with Negro life by a black author, or a white author.
- 1917 - James W. Johnson calls April 17 "the date of the most important

single event in the entire history of the Negro in the American theatre" it is the first time anywhere in the United States that Negro actors in the dramatic theatre command the serious attention of critics, the public, and the general press. The occasion is the presentation at the Garden Theatre by Ridgely Torrence of three plays, **The Rider of Dreams**, **Granny Maumee** and **Simon the Cyrenian**.

- 1919 - Charles Gilpin acquires the role of the Negro clergyman in Drinkwater's production of **Abraham Lincoln**.
- 1920 - In the November 6 issue of **Billboard**, the first show business trade paper to search out, report on, and encourage black performers, there appears a new feature entitled "Jackson's Page." James Albert Jackson, a black man, writes and edits the new feature.
Emperor Jones wins acclaim for its star, Charles Gilpin, but work is still scarce for black actors. Gilpin returns to his job as an elevator operator after the run of the play.
 Charles Gilpin receives the Spingarn Medal for highest achievement by an American Negro during the year. The Drama League votes him one of the ten people that season who had done the most for theatre.
- 1921 - Noble Sissle and Eubie Black write the songs and act in **Shuffle Along**, Flournoy Miller and Aubrey Lyles write the book. Florence Mills has her first important role and its score includes, "I'm Just Wild About Harry." **Shuffle Along** is conceived primarily for Negroes and is produced on a shoestring. It barely opens at the Howard Theatre in Washington, D.C. **Shuffle Along** is such a smash hit at the Sixty-Third Street Theatre in New York that the Traffic Department, because of the double lines for tickets and the car and taxi jams that develop, have to make Sixty-Third a one-way street. Word of its virtues soon spread and it is moved to Broadway. **Shuffle Along** is the first all-black musical to make it to the "main stream" and it opens a few new doors for some talented black writers and performers.
- 1922 - **Put and Take** by Irving Miler, **Strut Miss Lizzie** by Creamer and Layton are two Negro musicals to follow "Shuffle" to Broadway.
- 1923 - Roland Hayes makes his debut at Carnegie Hall.
Liza with a score by Maceo Pinkard is a hit. Leonard Harper's **Plantation Days** tours London.
 Willis Richardson's **Chip Woman's Fortune** is presented at the Lafayette Theatre.
- 1924 - Paul Robeson stars with Mary Blair in Eugene O'Neill's **All God's Chillun Got Wings**, a play about an interracial marriage presented at the Provincetown Playhouse in New York.
 Black americans resent O'Neill's apparent assumption that only tragedy could result from such a union.

When the press learns that Robeson is to kiss blonde Miss Blair's hand onstage, a mighty protest arises from the public and press, with editorial demands for the banning of the production lest it cause riots. The play opens, nothing untoward happens. But due to this internationally publicized controversy, young Paul Robeson and young O'Neill both become widely known.

- 1924 - The Star of New York, London, and Paris, Florence Mills has Lew Leslie's show **Dixie to Broadway** built around her.
- 1925 - Noble Sissle and Eubie Blake's **Chocolate Dandies** begins a long run.
 Paul Robeson stars in the revival of Eugene O'Neill's **The Emperor Jones**.
- 1926 - The Paul Green plays, **In Abraham's Bosom** and the **House of Connelly** give opportunities to excellent Negro actors, Abbie Mitchell, Frank Wilson and Jules Bledsoe. **In Abraham's Bosom** receives the Pulitzer Prize.
Lulu Belle by Edward Sheldon casts white actors as its mulatto leads, but the rest of the cast are almost entirely Negro.
 Florence Mills stars in Lew Lewlie's **Blackbirds of 1926**.
- 1927 - DuBose and Dorothy Heyward's **Porgy** (which later becomes **Porgy and Bess**) is the dramatic hit of the Twenties with a long run in New York and London.
- 1928 - Flournoy Miller and Aubrey Lyles produce **Keep Shuffling**.
 Frank Wilson, star of **In Abraham's Bosom**, has his play, **Meek Mose**, playing on Broadway.
 Bill "Bojangles" Robinson stars in his first Broadway hit, **Lew**.
- 1924 - The Star of New York, London, and Paris, Florence Mills has Lew Leslie's show **Dixie to Broadway** built around her.
- 1925 - Noble Sissle and Eubie Blake's **Chocolate Dandies** begins a long run.
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Frank Wilson, star of **In Abraham's Bosom**, has his play, **Meek Mose**, playing on Broadway.

Bill "Bojangles" Robinson stars in his first Broadway hit, Lew Leslie's **Blackbirds of 1928**, 518 times. "I Can't Give You Anything But Love Baby" is from the score by Fields and McHugh.

- 1929 - Garland Anderson's **Appearances** is the first play on Broadway by a Negro.

Hot Chocolates, a Broadway revue, makes Fats Waller's "Ain't Misbehavin'" so popular that almost fifty years later **Ain't Misbehavin'** is selected as the title for a long-running, and very popular Broadway revue.

Wallace Thurman's **Harlem** is the second play on Broadway by a Negro in collaboration with William Jourdan Rapp.

- 1930 - Marc Connelly adapts and directs **The Green Pastures** starring Richard B. Harrison as DeLawd. Harrison is over 65 years old before getting his first chance in the legitimate theatre. **The Green Pastures** is considered by some to be a Negro folk fable. It is dramatized, directed and produced by whites to be performed by blacks, and it wins the Pulitzer Prize.

- 1931 - Ethel Waters stars in **Rhapsody in Black**.

- 1933 - **Louisiana** by Augustus Smith is presented on Broadway, the work of a black American.

Run Little Chillun by Hall Johnson with collaboration by Lew Cooper is considered a successful folk drama of Negro life on Broadway.

- 1934 - **Legal Murder** by Dennis Donohogue is a Broadway production by a Negro playwright.

- 1935 - **Porgy and Bess** or **Porgy** revived, is destined to have many more revivals over the years.

The Federal Theatre Project is established in Harlem by the government's Works Progress Administration. The Project gives Negroes a chance for the first time to learn something about stage management, lighting, and other matters relating to backstage activities--an opportunity the commercial theatre never allowed due to the objection of the white stagehands union and other syndicates.

Even Negro-owned theatres have to have white stagehands. And in colored movie or vaudeville houses, according to union rules, only white operators can run motion picture projectors or operate spotlights.

Orson Welles presents his Federal Theatre Project production of a tropical **Macbeth** set in Haiti.

- 1936 - Harlem's longest running play **Don't You Want To Be Free?** (135 performances) by Langston Hughes is performed by the Suitcase

Theatre starring Robert Earl Jones (James Earl Jones' father) in the leading role.

Josephine Baker returns to America to perform in the current **Ziegfeld Follies** which also stars Gypsy Rose Lee.

- 1937 - The Rose McClendon Players founded by Dick Campbell forms their Theatre Workshop and endures until 1942. Frederick O'Neal, Ossie Davis and other actors are given their first opportunities to rehearse and perform there. Writers such as Warren Coleman and Lofton Mitchell are allowed to see their plays performed there.

Abram Hill's **On Striver's Row**, a comedy, becomes a Harlem hit and is often revived thereafter.

- 1938 - **Mulatto** by Langston Hughes stars Rose McClendon. After the death of Miss McClendon, Mercedes Gilbert stars. This play is the first play by a black author to survive more than one year on Broadway.

- 1939 - An act of Congress abolishes the Federal Theatre Project.

Mamba's Daughters, by DuBose and Dorothy Heward is about miscegenation. The director, Guthrie McClintic (husband of Helen Cornell) introduces Ethel Waters to the dramatic stage and commissions Perry Watkins, the first black scenic designer on Broadway from the Federal Theatre Project. This gives Watkins his first chance to work and study plays.

- 1940 - Theodore Ward attempts to form a repertory theatre called The Negro Playwright's Company, but its first production **Big White Fog**, by Ward is forced to close because of the struggling company's difficulties with white theatrical unions.

Ethel Waters receives glowing reviews for her performance in **Cabin in the Sky**. "Taking a Chance On Love," "Honey in the Honeycomb," and "Happiness Is A Thing Called Joe" are tunes to which Rex Ingram, Todd Duncan, Dooley Wilson and Katherine Dunham danced and sang.

- 1941 - **Native Son**, by Richard Wright with Paul Green, stars Canada Lee. It achieves a modest run in spite of the fact that this was the spring preceding the United States' involvement in World War II.

- 1942 - **Porgy and Bess** is revived.

- 1943 - **Othello** with Paul Robeson begins longest (296 performances) American Shakespearean run on Broadway. Jose Ferrer as "Iago" and Uta Hagen as "Desdemona." **Othello** made Robeson a star in America after ten years of having made triumphs in Europe.

Billy Rose produces an unusual adaptation of Bizet's opera, **Carmen**, with libretto by Oscar Hammerstein II and an all-black cast headed by Muriel Smith and Muriel Rahn who alternate in the title role. **Carmen Jones** is considered a "Broadway Opera."

Katherine Dunham, the most distinguished pioneer in the transition of folk and popular dances from the ethnic into the interpretive, consolidates her long-lasting dance company in the **Tropical**

Revue at the Martin Beck Theatre on Broadway.

- 1944 - **Billboard** creates its own version of Hollywood's Academy Awards by instituting the Donaldson Awards. Actors, producers, stagehands, etc., vote for their favorites in the Broadway theatre. The first 1943-44 awards go to Paul Robeson and Margaret Sullivan.

Anna Lucasta comes downtown from Harlem to become the longest-running all-black cast in Broadway history. It lasts 957 performances and a Chicago and Eastern Seaboard touring company, a cross-country touring company, a London season, and two subsequent motion pictures of the same title, one white and one black. Hilda Simms, Canada Lee, Georgia Burke, Earle Hyman, Frederick O'Neal, Hilda Haynes and Alice Childress comprised the highly talented cast of the black version.

- 1945 - Lillian Smith's drama of miscegenation, **Strange Fruit** stars Jane White.

Deep Are the Roots stars Barbara Bel Geddes with Gordon Heath playing opposite.

Earle Hyman has a prominent role in **The Duchess of Malfi**.

On Whitman Avenue by Maxine Wood concerns Negro housing and stars Canada Lee for 148 performances.

Jet, the drama of a wounded veteran returning to the racially tense South introduces Ossie Davis in his first important role, but only lasts on Broadway for one week.

- 1955 - **House of Flowers**, a production set in Haiti, does not prove to be a profitable investment, but it launches Diahann Carroll in her own musical.

- 1956 - A Joyce Cary novel about colonial days in Africa, **Mr. Johnson** brings success to its young star, Earle Hyman, in his first important Broadway role.

Sammy Davis, Jr., opens with top billing at the Broadway Theatre in **Mr. Wonderful** with the Will Mastin Trio (i.e. Sammy's father, uncle and old family friend).

- 1957 - **Shinbone Alley** is the second Broadway musical slated to fit the talents of a star; starring Eartha Kitt who plays Don Marquis' famous feline, "mehitabel."

Jamaica, one of the most successful musicals ever to star a black female artist, Lena Horne, is a David Merrick production and has a supporting cast of Ricardo Montalban, Ossie Davis, and Alvin Ailey.

Simply Heavenly, book and lyrics by Langston Hughes, based on his Jesse B. Semple character, from the "Simple" stories that appeared in Chicago Defender and the New York Post is produced on Broadway at the Playhouse Theatre, but it closes early.

- 1959 - **A Raisin in the Sun** by Lorraine Hansberry starring Claudia McNeil, Sidney Poitier, Diana Sands, Ruby Dee, Ivan Dixon and

Louis Gossett; directed by Lloyd Richards, receives the best-play-of-the-year citation from the New York Drama Critics Circle. It is the first time a black playwright has a hit on Broadway and it runs well into the Sixties.

Paul Robeson opens the Shakespeare Memorial Theatre's 100th Anniversary at Stratford-On-Avon.

Part Four: The Sixties

- 1960 - **The Long Dream** adapted from a novel by Richard Wright flops.

The Cool World by Warren Miller and Robert Rosen featuring Billy Dee Williams, Hilda Simms, Roscoe Lee Brown, Calvin Lockhart and Harold Scott closes after an exceedingly short run.

- 1961 - Among the most impressive off-Broadway dramas are Edward Albee's **The Death of Bessie Smith** and Jean Genet's **The Blacks** which features James Earl Jones, Lou Gossett, Cicely Tyson, Godfrey Cambridge, Maya Angelou, playwright Charles Gordone, Roscoe Lee Brown and Raymond St. Jacques.

Although it is not commercially successful **Purlie Victorious** by Ossie Davis had notable performances by Ossie Davis, Ruby Dee, and Godfrey Cambridge. Howard de Silva directed the farcical satire on aspects of race relations in the South.

- 1962 - The Katherine Dunham dance company and Ural Wilson perform in **Bamboche**.

Moon On A Rainbow Shawl by Trinidadian, Errol John, gets notable mention as a play of excellence on off-Broadway.

Following Oscar Hammerstein's death, Richard Rodgers becomes his own lyricist for the first time and writes the score for **No Strings**, an innovative musical starring Diahann Carroll, in an interracial romance with Richard Kiley. Rodgers moves his orchestra out of the pit behind a scrim onstage and integrates the musicians with the action. The hit song is "The Sweetest Sounds." Diahann Carroll receives a Tony for her performance in this musical built especially for her.

- 1963 - **Tambourines to Glory**, adapted by Langston Hughes from his novel of the same title, with the gospel churches of Harlem as background, stars Hilda Simms, Clara Ward, Louis Gossett, Anna English, and Micki Grant. It loses \$120,000.

- 1964 - In **Blues for Mister Charlie** by James Baldwin, Diana Sands makes a personal hit with a long dramatic monologue. "Blues" arouses much discussion, pro and con. It stars Al Freeman, Jr., Rosetta Le Noire and John McCurry. "Blues" is not only controversial, it is the first play to portray the Negro militant on Broadway.

The Sign in Sidney Brustein's Window by Lorraine Hansberry, has a brief run on Broadway. It closes on the eve of the author's funeral (Hansberry is 34 at her death in January) and its cast is largely white.

Golden Boy by Clifford Odets is revived for Sammy Davis, Jr., as the boxer and Paula Wayne as his girlfriend. It is one of the more highly successful musicals in history. Forty weeks after its premiere, it still has standing room only.

Funnyhouse of A Negro by Adrienne Kennedy is less than an hour in length, but it is a compelling creation of a playwright with an original imagination.

The Owl and the Pussycat co-stars Diana Sands and Alan Alda. The comedy is a hit on Broadway and in London.

By the time **Dutchman**, by LeRoi Jones, the most talked about and controversial playwright in New York, is presented at the Cherry Lane Theatre featuring Robert Hooks as the man and Jennifer West as the woman, it is a hit almost before it begins.

Josephine Baker is a special attraction with the Folies Bergere.

The Toilet and **The Slave** open on a double bill at the St. Marks Playhouse in New York. They receive both praise and damnation and make it obvious that Jones is a playwright who can not be ignored.

Porgy and Bess is revived again.

The Shakespeare Festival produces **Othello** With James Earl Jones.

- 1965 - An off-Broadway production in the Greenwich Mews of the Village Presbyterian Church and Brotherhood Synagogue of **Jerico-Jim Crow** by Langston Hughes is presented in the Sanctuary above the Mews.

The Prodigal Son by Langston Hughes is presented in the theatre beneath the church. From the Mews, **The Prodigal Son** goes to Paris.

The Amen Corner by James Baldwin is first presented at Howard University in Washington D.C. Later it is produced and directed by Frank Silvera in California starring Bea Richards, then, **The Amen Corner** comes to Broadway. It is not a problem play in the racial sense. A second production that tours England and Europe is directed by Lloyd Richards and stars Claudia McNeil.

Douglas Turner Ward's **Happy Ending** and **Day of Absence** brighten the East Village, add a glow to off-Broadway and bring to public acclaim its author as an actor and Robert Hooks, an actor as a producer.

The Zulu and the Zayda with Lou Gossett and Menasha Skulnik is considered a play of value, but it is not a hit.

- 1966 - **Dutchman**, by Le Roi Jones is filmed in England with Al Freeman, Jr. and Shirley Knight.

- 1967 - **Hallelujah Baby!** is a musical spanning the Black Experience in and out of show business over a sixty year period. Not only does this musical win a Tony, but its stars, Leslie Uggams and Lillian Hayman also win Tonys.

Hello Dolly (the adapted musical version of Thornton Wilder's **The Matchmaker**) stars Martha Raye, then Betty Grable, then Bibi Osterwald, and then Carol Channing in the lead. In November, all Black actors headed by Pearl Bailey and Cab Calloway take over and make it the "hottest ticket" in town (i.e., New York). Pearl Bailey receives a Tony for her performance.

Godfrey Cambridge stars with Molly Picon in **How to be a Jewish Mother**.

- 1968 - James Earl Jones gives a powerful performance as the first black heavyweight champion, Jack Johnson in Howard Sackler's **The Great White Hope** with Jane Alexander as his tragic mistress. The play captures three awards, the Pulitzer, the Tony and the Critic's Circle. Mr. Jones and Miss Alexander both receive Tonys.

Jason Robards and Diana Sands star in **We Bombed in New Haven**. It is termed an "interesting loser."

In its first year, the Negro Ensemble Company (NEC) more than justifies its grants with worthwhile productions of **Song of the Lusitanian Bogey** starring Moses Gunn; **Daddy Goodness** headed by Rosalind Cash and Moses Gunn; **Summer of the Seventeenth Doll**; **Kongi's Harvest**; and **God is a (Guess What)**.

- 1969 - Heavyweight boxing champion, Muhammad Ali (Cassius Clay) makes his Broadway debut in the unsuccessful production, **White Buck** with Ron Rich.

Lonne Elder III scores a hit with a successful production of his **Ceremonies in Dark Old Men** which stars Arthur French, David Downing, William Jay, and Douglas Turner. Once again the Negro Ensemble Company receives a Tony, this time it is a special award.

To Be Young, Gifted and Black by Lorraine Hansberry is produced as a tribute to its late author. In the cast are Alice Borden, Tina Sattin and Janet League. Later it is filmed for television with Ruby Dee and others.

No Place to Be Somebody by Charles Gordone is the first off-Broadway production to be moved to Broadway and awarded the Pulitzer Prize. It stars Ron O'Neal (of "Superfly" fame), Nathan George, Nick Lewis and Walter Jones.

Part Five: The Seventies

- 1970 - Moses Gunn stars as "Othello" presented by the American Shakespeare Festival with Roberta Maxwell as "Desdemona."

Ossie Davis' comedy, **Purlie Victorious**, is adapted into the musical version, **Purlie**. Melba Moore and Cleavon Little win Tonys for their performances.

The Me Nobody Knows, an off-Broadway musical, based on the book of the same title edited by Herb Schapiro moves to Broadway with Douglas Grant in the cast.

Boesman and Lena is presented off-Broadway with Ruby Dee, James Earl Jones, and Zakes Mokae.

William Hanley's **Slow Dance On The Killing Ground** stars Clarence Williams III.

NEC presents productions of the **Harangues, Brotherhood** and **Day of Absence** by Douglas Turner Ward.

The American Place Theatre produces **Five On The Black Hand Side**.

The Roundabout Theatre presents a production of **Oedipus** with the leading role portrayed by black actor, Gordon Heath, with Elizabeth Owens.

1971 - The number of productions by and with black talent increases.

Two Gentlemen of Verona starring black actor Clifton Davis and Raul Julia (**Dracula** 1979) garner a Tony and a Drama Critics Award.

Jesus Christ Superstar features Ben Vereen and catapults his career.

Linda Hopkins in the musical, **Inner City** with Carl Hall, Delores Hall, and Larry Marshall, receives a Tony award.

Ain't Supposed to Die a Natural Death by Melvin Van Peebles lasts long enough for the author to get another show (**Don't Play Us Cheap**) onto a Broadway stage.

Black Girl is a successful off-Broadway production that moves to Broadway for a short while.

The American Place Theatre's off-Broadway production of **Pinkville** features black actors with Michael Douglas.

NEC presents productions, **Dream on Monkey Mountain, Sty of the Blind Pig** and **Perry's Mission**, with Ron O'Neal and Roscoe Lee Browne.

James Earl Jones stars as "Othello" in a Center Theatre Group.

1972 - Ben Vereen, the Leading player in **Pippin**, opens October 23 at the Imperial Theatre and receives a Tony Award.

Melvin Van Peebles chalks up two shows on Broadway with his second show, **Don't Play Us Cheap** starring Avon Long and Joe Keyes, Jr.

NEC produces **A Ballet Behind the Bridge** and **The River Niger**, which ultimately moves to Broadway.

One of the best productions of the Roundhouse Theatre is **Wedding Band** with Ruby Dee and Hilda Haynes.

Don't Bother Me I Can't Cope, an evening of song and dance, at the Edison Theatre is presented with and by Mikki Grant. An orchestra center row seat is priced at \$7.50.

1973 - **Raisin** based on Lorraine Hansberry's **A Raisin in the Sun**, book by Robert Nemiroff and Charlotte Zaltzberg, starring Virginia Capers, Ralph Carter, Debbie Allen with Howard Roberts as Musical

Director opens at the Forty-Sixth Street Theatre. **Raisin** wins a Tony for Best Musical and a Tony for Best Actress (Virginia Capers).

James Earl Jones stars in another revival of Eugene O'Neill's **The Iceman Cometh**.

Cab Calloway and Barbara McNair star with Hal Linden (**Barney Miller** television show) in **The Pajama Game** at the Lunt-Fontaine Theatre.

Josephine Baker stars in a limited performance at the Palace Theatre on December 31, and at Carnegie Hall with the George Faison Universal Dance Experience for four performances.

NEC produces **The River Niger** and receives a Tony Award. Frances Foster and Roxie Roker gain Broadway's attention.

1974 - **Of Mice and Men** by John Steinbeck starring James Earl Jones opens December 18 at the Brooks Atkinson Theatre.

All Over Town directed by Dustin Hoffman with Cleavon Little opens at the Booth Theatre on December 29.

Sammy Davis, Jr. stars in a limited performance of **Sammy on Broadway** at the Uris Theatre.

Siswe/Banzi Is Dead in repertory with **The Island** wins Tonys for its cast John Kani and Winston Ntshona. It is an Afro-British production.

1975 - **The Wiz** wins the Tony Award for Best Musical, Best Musical Score, Best Supporting Actor (Ted Ross), Best Supporting Actress (Dee Dee Bridgewater), Best Director of a Musical (Geoffrey Holder) and Best Choreographer (George Faison) - Stephanie Mills is catapulted to stardom when **The Wiz** opens at the Majestic Theatre.

All God's Chillun Got Wings directed by George C. Scott starring Trish Van Devere and Robert Christian opens at the Circle in the Squadron Theatre. The original performance opened in 1924.

1976 - **Guys and Dolls** is revived with an all-black cast starring Robert Guillaume, Emmett "Babe" Wallace with Howard Roberts as Musical Director. It opens at the Broadway Theatre, July 21.

Ntozake Shange's **for colored girls who have considered suicide when the rainbow is enuf** is presented by Joseph Papp and Woodie King, Jr., at the Booth Theatre on September 15. Trazana Beverly and Rise Collins are exciting in this program of poetry.

I have a Dream adapted by Josh Greenfeld from the words of Dr. Martin Luther King, Jr., opens at the Ambassador Theatre starring Billy Dee Williams.

Porgy and Bess is revived again on September 25 at the Uris Theatre.

Your Arms Too Short To Box With God conceived from the Book of Matthew by Vinnette Carroll opens December 22, at the Lyceum Theatre with additional music and lyrics by Micki Grant.

Ipi-Tombi, a musical of South Africa opens at the Harkness Theatre January 12 and closes after 39 performances.

1978 - **Eubie**, conceived and directed by Julianne Boyd with music by Eubie Blake opens at the Ambassador Theatre September 20.

Ain't Misbehavin', a musical based on the music of Thomas "Fats" Waller from an idea by Murray Horwitz and Richard Maltby, Jr., receives a Tony Award and is voted Best Musical by the New York Drama Critics, Drama Desk, and Outer Critics Circle Awards. Nell Carter, the featured actress also receives a Tony.

Dancin', conceived, directed and choreographed by Bob Fosse receives Tonys for Best Choreography and Best Lighting starring Wendy Edmead and Bruce Anthony Davis.

Paul Robeson by Phillip Hayes Dean directed by Lloyd Richards opens January 18 at the Lunt-Fontaine Theatre with James Earl Jones.

Timbuktu, based on the musical **Kismet** by Charles Lederer and Luther Davis stars Eartha Kitt. The action takes place in Timbuktu, in the Ancient Empire of Mali, West Africa in the year 1361.

The Mighty Gents by Richard Wesley, directed by Harold Scott opens April 16 at the Ambassador Theatre, and closes April 23 after nine performances.

1978 - **Stop The World I Want To Get Off** - starred Sammy Davis, Jr. for a limited engagement of 29 performances and 1 preview. The original production opened October 5, 1962 and played 555 performances.

White Pelicans presented by Jose Ferrer lasted from October 19-29 for a total of 14 performances and 18 previews. **White Pelicans**, a drama in two acts starred Jose Ferrer and Morgan Freeman. The action is placed in the present time in a cabin in an Arctic wasteland.

1979 - **Eubie**, a musical in two acts, featuring title songs such as: "I'm Just Wild About Harry," "My Handman Ain't Handy No More," "If You've Never Been Vamped By A Brownskin, You've Never Been Vamped At All," closes October 7, after 439 performances and 7 previews.

Ain't Misbehavin' - opened May 8, 1978 at the Longacre Theatre. On January 29, it moved to the Plymouth Theatre.

Dancin' - opened at the Broadhurst Theatre on March 27, 1978. **Dancin'** contained dance creations, but no story. This musical entertainment in 3 acts and 13 scenes of necessity utilized black artists in an integrated cast.

Umabatha, The Zulu Macbeth - ran for 41 performances from April 9 through May 12 at the Entermedia Theatre featuring the Phe Zulu Company of Africa.

1980-81 - **Home**, a comedy performed by the Negro Ensemble Company at the Colt Theatre stars Charlie Brown.

Ain't Misbehavin' still in performance at the Plymouth Theatre in November.

Dancin' created by Bob Fosse remains on Broadway despite lack of a plot.

West Side Story, Leonard Bernstein's and Stephen Sondheim's long-running musical is revived at the Minskoff Theatre.

"An Anecdotal Chronology of Selected Highlights in the History of American Theatre and Entertainment: 1698-1981" discloses the purposiveness of theatre as intercultural communication in the United States. At the same time, the "Chronology" is a concise reference collection documenting the evolution of Black Theatre in America that "holds as t'were a mirror up to nature," and is a revealing resource of varied aspects of the status of Black heritage and spirit in society's reflected in the history of the American stage.

Black America in theatre has become an important form of social commentary. The chronological crystalization of the cultural history of the American minority in theatre is not only representative of the attitude and value system of the society in which they were produced, but it is also useful as an illustrative reflection upon the problems of Afro-American artists which are directly related to their economic and social circumstances.

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A flyer. "Legitimate Theatre Entertainment," Speech Communications Association Convention, New York, Nov., 1980.

Selected Bibliography's of Faculty Members at Delaware State College

Many educators find that the task of empirical research and creative writing is a *prima facie* responsibility they have to their profession in order to better translate theory into practice, remain current in their discipline and to become more motivating in the classroom. Others may benefit from such tenacious endeavors; we therefore, offer this section to invite our peers with similar interests to become aware of a small sample of the scholarly works that have come out of our institution.

Dr. Elise Brathwaite, Assistant Professor of English

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