## Temporal Experience and Affiliation Attributions for Social Role Outcomes<sup>1</sup>

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## Abstract

The present study examined the relationship between temporal experience and the causal determinants in the attributional model of motivation in the affiliation domain. It was hypothesized that individuals who tend to attribute affiliation outcomes to effort are more likely to demonstrate a) a greater sense of temporal continuity, b) more positive affective anticipations for the future, and c) more efficient time utilization. One hundred fourteen female and 101 male tenth graders responded to objective psychometric inventories purported to appraise their attributions for affiliation outcomes, sense of continuity, optimism, hopelessness and time utilization. The three hypotheses were supported for attributions for affiliative success but not failure. In general, effort along with context were perceived to be the most important causes of both affiliation success and failure.

## Temporal Experience and Affiliation Attributions for Social Role Outcomes

Time and space are the primitive predicates of existence. Individuals use these coordinates to orient themselves in the mist of ongoing events. The subjective construction of time has been characterized as having dimensions such as temporal orientation, retrospective and prospective extension, density of future events, continuity and optimism. The subjective construction of space, as a psychological variable, is primarily concerned with the social system lived in. Social roles dispose individuals to the values they hold and channel their actions in everyday life. Temporal and social role constructions mediate the perceptual experience of life. Certainly as the psychological coordinates of existence, they must be related to each other. There are few studies, however, which have directly examined the relationships between individuals' temporal and social experience.

During the past two decades, a rather extensive literature has developed relating the personal experience of time to a host of variables generally related to interpersonal experience of social roles comprising a life-space. The largest number of these studies relate temporal experience to personality and psychopathology. Representative examples of this type include studies confirming systematic relationships between subjective time and emotional disturbances (Braley and Freed, 1971; Davids, 1969; Dilling and Rabin, 1967; Goldstone and Goldfarb, 1962), sociopathy (Davids, Kidder, and Reich, 1962; Stein, Sarbin, and Kulick, 1968), alcoholism (Roos and Albers, 1965), anxiety (Rychlak, 1972), and self-actualization (Getsinger, 1975; Yonge, 1975). The personal experience of time has also been demonstrated to be systematically associated with personality dimensions which are known to covary with interpersonal behavior. Representative variables in this group include locus of control (Thayer, Gorman, Wessman, Schmeidler and Mannucci, 1975; Platt and Eisenman, 1968), achievement motivation (Epley and Ricks, 1963; Nisan, 1972), and preference for delayed gratification (Klineberg, 1968; Rozek, Wessman, and Gorman, 1977). Additionally, temporal experience has been related to social status (Koenig, Swanson, and Harter, 1980; LeShan, 1952) and gender (Cottle and Pleck, 1969).

Studies directly examining the relationships between temporal and social experience are scarce. Tolor, Brannigan, and Murphy (1970), using the Future Events Test, reported some support for the notion that extended future perspective is positively associated with psychological closeness (i.e., desired intimacy with mother, father, sister, brother, best friend, neighbor, and stranger). In an exploratory study of personality and the subjective experience of time using a sample of 17 bright college students, Wessman (1973) found that scores on the Long Term Personal Direction scale of the Temporal Experience Questionnaire (TEQ) correlated positively with TAT scores on the sum of themes of affiliation pleasure. Subjects with a greater sense of continuity were judged to be well socialized and responsible as indicated by their MMPI, Rorschach, and TAT responses, and more likely to have attained Eriksonian "identity status" as determined by clinical ranking. Wessman also reported that subjects scoring higher on the Time Utilization Scale of the TEQ appeared more confident, energetic and venturesome (as measured by the 16 PF  $_{
m F}$ and H scales) and displayed more initiative and industry (Q-sort based on Erikson's psychosocial stages). Lower scores on the Time Utilization scale

were related to subjects appearing timid, retiring, restrained and unassertive. Epley and Ricks (1963), in a study using 23 Harvard College students, reported that interpersonal involvement (affective Q-sort) correlated .64 with prospective span and .41 with retrospective span (TAT). They also reported that emotional control and depth (Rorschach FC) correlated .68 with prospective span and .59 with retrospective span. Epley and Ricks (1963) observed that the capacity to respond to others (Rorschach FC) is higher in subjects with greater foresight. Concurring with Rapaport's (1952,1953) theory of impulse delay, they suggested that the capacity to respond to others and emotional integration are related to temporal experience. Subjects with greater foresight (i.e., longer prospective span) were also found to be less anxious (-.63). Wessman and Ricks (1959) also reported that subjects with greater foresight were consistently happier.

The present study examined the relationship between temporal experience and attribution for success and failure in social roles. Three dimensions of temporal experience were selected for study based on the preceeding literature and Shostrom's description of the temporal experience of self-actualizing individuals. Shostrom (1968), in describing time as an integrating factor in goal setting, wrote that the self-actualizing person is able to tie the past and future to the present in meaningful continuity, able to use time in a competent manner, and expresses faith in the future. This study, therefore, selected the temporal experience variables of continuity, time utilization, and optimism for examination.

To parallel the subjective experience of time, the subjective experience of social roles was selected for examination. The attribution model of success and failure in affiliative experience served this purpose. The four major perceived causes of affiliation outcomes in the model are ability, effort, context, and luck (Weiner, 1972). Affiliation ability refers to skill at getting along with people. Affiliation effort denotes trying to get along with others. Affiliation context refers to the social attractiveness of the people with whom one interacts, while affiliation luck refers to the role chance plays in determining the quality of social relationships.

These four causal ascriptions for affiliation experiences may be classified using dimensions: locus (internal or external) and stability (fixed or variable). Table 1 shows ability and effort to be internal, while context and luck are external. Ability and context are considered fixed while effort and luck are variable and more subject to change. It is important to note that of the four causal determinants of the quality of social experiences, the only one personally controllable is effort because trying to get along with others may be varied by the individual.

Insert Table 1 about here

It would appear that a person's view of time would mediate his/her social behavior and beliefs. This study sought to determine the relationships between the personal experience of time and causal attributions concerning the quality of social role experience in affiliative success and failure. It is reasonable

to expect that a greater sense of temporal continuity, more effective utilization of time, and more positive affective anticipations of the future (i.e., optimism) should be associated with attributions concerning social experiences. For example, individuals who construe the connections between their present actions and their future opportunities may invest more effort enacting social roles. Effective time utilization may promote increased effort expenditure in trying to get along with others. And finally, optimism may facilitate attributions to effort in explaining affiliative experiences.

Given this perspective, it is hypothesized a) that individuals possessing a more continuous rather than discrete sense of time will be more likely to attribute social success and failure to affiliation effort rather than to affiliation ability, context, or luck. It is also hopethesized b) that individuals who more effectively use time will tend to attribute their social success and failure to affiliation effort rather than to affiliation ability, context, or luck. It is further hypothesized c) that individuals with more optimistic affective anticipations for the future will tend to ascribe social success and failure to affiliation effort rather than to affiliation ability, context or luck. The purpose of the present study was to explore these hypothesized relationships between individuals' personal experience of time and their tendency to causally ascribe social experience outcomes to affiliation effort.

## Method

# Subjects

A sample of 215 high school students (114 females and 101 males) was selected for this study. These subjects represented the entire tenth grade class of a suburban, typically middle class school, and had a modal age of 16 years. This sample was selected to provide a socioeconomically homogeneous group of subjects because subjective time has been shown to vary with social status. A high school group was selected because of the salience of affiliative behavior during these years.

# Procedure and Instruments

The Long-Term Personal Direction and Time Utilization scales of the Temporal Experience Questionnaire (Wessman, 1973), two measures of optimism/pessimism, the Achievability of Future Goals subscale of the Future Time Perspective Inventory (Heimberg, 1961) and the Hopelessness Scale (Beck, et. al., 1974), and the Affiliation portion of the Multidimensional-Multiattributional Causality Scale (Lefcourt et. al., 1979) were completed by the subjects under standard conditions as part of a larger research project.

The Long-Term Personal Direction (LTPD) subscale of the Temporal Experience Questionnaire (Wessman, 1973) was used as a measure of temporal continuity. Subjects were asked to rate 20 items on a 7-point likert scale from "not at all" to "completely" descriptive of themselves. This scale was constructed by selecting the 10 items with the highest positive and negative loadings, respectively, from a Thurstone centroid factor analysis. The positive items reflect a sense of continuity of past, present, and future, as well as motivation for and commitment to long-term goals. The negative items reflect an unstructured, fragmented, and discouraging conception of time with an absence of aims, commitment, and future goals.

The <u>Time Utilization</u> (TU) subscale of the Temporal Experience Questionnaire (Wessman, 1973) was used as a measure of efficient use of time. This subscale uses the identical 7-point likert response format and was constructed in the same manner as previously described for the LTPD. Positive items reflect a high degree of organization and planning of time and convey a sense of time as structured, ordered, and organized. The negative items reflect disorganization and ineffective use of time.

The Achievability of Future Goals (AFG) subscale of the Future Time Perspective Inventory (Heimberg, 1961) was used as a measure of optimism. This scale contains 8 items to be rated on a 7-point likert scale and has a reported coefficient alpha of .76.

The <u>Hopelessness Scale</u> (HS) (Beck, et. al., 1974) also was used to operationally define optimistic/pessimistic future expectations. This questionnaire consists of 20 true-false statements keyed negatively. That is, higher scores represent higher degrees of hopelessness or pessimism. Inclusion of two measures (i.e., AFG and HS) with different response formats provided a measure of the validity of the findings with respect to optimism. A principal components analysis of the HS yielded three subscore factors: (a) an affective factor (5 items) related to hope, enthusiasm, happiness, faith, and good

times, labeled Feelings About the Future, (b) a motivational factor (8 items), labeled Loss of Motivation, concerned with giving up, not wanting anything, and not trying to get something that is wanted, and (c) a cognitive factor (5 items) labeled Future Expectations, reflecting "anticipations regarding what life will be like; a dark future; getting good things; things not working out; and the future being vague and uncertain" (Beck, et. al., 1974). The authors reported a total score correlation of .74 with clinical ratings of hopelessness, and coefficient alpha (KR<sub>20</sub>) internal consistency of .93.

The Multidimensional-Multiattributional Causality Scale (MMCS) was developed by Lefcourt, et. al., (1979) to measure causal attributions of ability (internal/ stable), effort (internal/unstable), task difficulty (external/stable), and luck (external/unstable) for both success and failure in achievement and social affiliation. Of the 48 questions on the scale, 24 refer to achievement situations and 24 to social affiliation. Only results for the affiliation attributions are reported in this study. The 24 questions are balanced for success and failure and four attributions resulting in 8 independent subscales containing 3 items each. Subjects were asked to rate each item on a 5-point likert scale from agree to disagree. In addition, composite internality and stability scores were derived. Internality composites were computed by summing the scores for ability and effort and subtracting scores for context (task difficulty) and luck. Stability composites were computed by summing the scores for ability and task difficulty and subtracting scores for effort and luck. Thus negative composite scores indicate either external or unstable attributional patterns.

## Results

Before reporting results pertinent to the hypotheses, several descriptive statistics and analyses will be presented. Means and standard deviations of the time measures are summarized in Table 2. Average scores for the Long-Term Personal Direction (continuity) and Time Utilization measures were 74.23 (SD = 12.14) and 67.59 (SD = 11.85) respectively, of a possible total of 120. The mean score for the Achievability of Future Goals (optimism) measure was 35.31 (SD = 6.78) of a possible 48 points. For the Hopelessness (pessimism) measure, the mean was 2.67 (SD = 3.15) of a possible 20 points.

Insert Table 2 about here

Means and standard deviations of the four causal attributions and two composite indexes for achievement success and failure are reported in Table 3. Results of paired t-Tests between success and failure for each attribution indicated that ability, effort and context were considered significantly more important than failure, while luck was more important for failure than for success (p < .01 in all instances). Subjects also made significantly (p < .001) more internal and stable attributions for success than failure.

Insert Table 3 about here

Separate one-way analyses of variance (Winer, 1971) for the success and failure conditions, respectively, repeated across the four causes were performed to test whether differences among attributions were significant. These results indicated highly significant effects (p < .001) in both the success (F = 224.21) and failure (F = 22.97) conditions. A postiori Scheffé comparisons indicated that subjects attributed social success significantly more to context than to ability (p < .01), effort (p < .05), or luck (p < .01), even though the magnitude of the mean differences between context and effort was not particularly large. Effort was seen as contributing a greater role (p < .01) than either ability or luck, while ability was greater than luck, all in the success condition.

In the failure condition, lack of effort and context were equally important, as the mean difference between them was non-significant, while both were considered more important than either ability or luck ( $\underline{p} < .01$ ). Lack of ability was also thought to play a greater role in social failure than bad luck ( $\underline{p} < .01$ ).

Following are the results for each hypothesis. Pearson correlations between the measures of temporal experience and causal attributions for social affiliation success and failure are reported in Table 4.

Insert Table 4 about here

Continuity. For social affiliation successes, temporal continuity was significantly and positively related to effort attributions (.17;  $\underline{p}$  < .05), as well as significantly but negatively associated with luck attributions (-.31;  $\underline{p}$  < .01). For affiliation failures, the sense of temporal relatedness was negatively and significantly ( $\underline{p}$  < .01) related to the context (-.21) and luck (-.26) attributions. Continuity was positively and significantly ( $\underline{p}$  < .01) related to the internality composite for both social success (.26) and failure (.25).

Time utilization. Time utilization was significantly and positively related to effort attributions for affiliation success (.20; (p < .01) and significantly but negatively associated with luck attributions for social success (-.17; (p < .05). The use of time was also negatively and significantly related to context ascriptions for social failure (-19; (p < .01). Use of time was positively and significantly related to the internality composite for both social success (.22; (p < .01) and failure (.16; (p < .05).

Optimism and Hope. Positive affective anticipations for the future (AFG optimism) were significantly and positively related to effort ascriptions for affiliation success (.21; (p < .01) and significantly but negatively associated with luck attributions for social success (-.45; (p < .01). Optimism was also significantly (p < .01) and negatively related to luck ascriptions for social failure (-.26). Belief in the achievability of future goals was significantly and positively associated to the internality composite for both social success (.41; (p < .01) and failure (.14; (p < .05) and to the stability composite for affiliation success (.23; (p < .01).

Results of correlations between social attributions and pessimism as measured by the Hopelessness Scale (HS) were consistent with the findings for the Achievability of Future Goals (AFG) measure with two exceptions. For social successes, effort attributions were not significantly related to pessimism on the HS  $(\underline{r} = -.11; ns)$ , but were related to optimism on the AFG as previsouly noted. On the other hand, adolescents making stronger attributions to context for social failures tended to be more pessimistic on the HS  $(\underline{r} = .17; p < .05)$ , while this relationship was not significant on the AFG.

## Discussion

The findings of this study support the three hypotheses that adolescents with a more facilitative temporal orientation tend to attribute their social successes to their own effort. Thus individuals who tend to attribute their social success experiences to affiliation effort are more likely to demonstrate: a) a greater sense of temporal continuity, b) more efficient utilization of their time, and c) more optimistic anticipations for the future. However, these hypotheses concerning effort attributions and temporal experience were not supported for social failures, as ascriptions to lack of effort were not systematically associated with any of the measures of temporal perspective.

The data only partially supported the three hypotheses that subjects with a better temporal perspective would be less likely to attribute social success and failure to affiliation ability, context and luck. A more mature construction of time did seem to be rather consistently associated with tending not to invoke luck as an explanation for social success and failure and less utilization of affiliation context as an explanation of failure in social experiences. Suprisingly, use of affiliation ability attributions was not systematically related to temporal experience.

In general, effort along with the context of social situations (e.g., the social attarctiveness of the people with whom one interacts) were perceived to be the most important causes of both affiliation success and failure. One's ability or luck were perceived as playing lesser roles. Increased importances of attributions to one's efforts in social successes (but not failures) was positively associated with more favorable temporal perspectives. Individuals believing luck was less a factor in their social relationships for both success and failure also were more likely to have facilitative temporal patterns. Those believing that the context was less important as a contributor to social failures (but not successes) were also more likely to have more adaptive temporal perspectives. Thus effort was the only attribution to be significantly and positively associated with higher degrees of temporal continuity, time utilization and optimistic expectations.

The above combination of findings contributed to the result that adolescents who overall attribute both their social successes and failures more to themselves (i.e., internal locus) are more likely to report facilitative temporal perspectives. The stability dimension (in the success condition only) was related to optimistic anticipations for the future. This suggests that the more stable the causes of social success are perceived, the more likely individuals are to be optimistic concerning future events. The stability dimension in the success dimension was unrelated to temporal continuity and utility, as well as, to all of the time measures in the failure condition.

Several of the above findings merit further research. An intriguing finding was that the use of ability attributions for social experience outcomes were not associated with temporal experience. While ability attributions have been clearly shown to be associated with achievement outcomes among those with more adaptive temporal experience (Wolf and Savickas, in press), ability attributions do not get invoked in a similar fashion in the affiliation domain. This suggests the possibility that temporal experience has a more intimate

relationship with achievement motivation than with affiliation motivation. It may be that the achievement domain is more product oriented while the affiliation domain is more process oriented. If this were true, one would expect that to attain desired products, time-related behaviors such as concentration on future goals and efficiency would be important. In a process oriented domain such as affiliation, however, less time-related phenomenon such as empathy and cooperation would be more important than concentration and efficiency. In any event, this finding reinforces the importance of studying the attribution model in a variety of motivational contexts.

A second important finding is the relationship of optimism with social attributions. Optimistic individuals are more likely to attribute their social success to internal and stable causes. This is consistent with Weiner's (1980) suggestion that optimism is associated with stable attributions. Individuals who attribute their social successes to stable causes may have reason to hold positive anticipations for the future. In turn, optimistic individuals may be more likely to conceptualize their social success as due to stable causes. It is also worth noting that of the temporal experience variables, optimism had the strongest and most facilitative pattern of relationships with affiliation attributions. The relationships between optimism and attributions clearly deserves further investigation.

While the present study provided evidence of significant associations between temporal experience and causal attributions in the achievement domain, the nature of these relationships remains unclear. Further investigations of whether any of the variables temporally or causally precede any of the others or whether their relationships are more reciprocal and symmetrical remain to be explored.

	Locu	<u>s</u>
Stability	Internal	External
Stable (Fixed)	Ability	Context
Unstable (Variable)	Effort	Luck

Table 2
Means and Standard Deviations of Time Measures

Measure	Mean	SD	
Long-Term Personal Direction (Continuity)	74.23	12.14	
Time Utilization	67.59	11.85	
Achievability of Future Goals (Optimism)	35.31	6.78	
Hopelessness (Pessimism)	2.67	3.15	

Table 3

Means and Standard Deviations of Causal Attributions for Affiliation Success and Failure

Succes	SS	Failu	re	Paired
Mean	SD	Mean	SD	t-Test
7.60	2.27	6.25	2.17	8.28*
8.68	2.31	7.01	2.52	8.80*
9.32	2.08	7.01	2.68	11.36*
4.14	2.63	5.51	2.21	-7.91*
224.	. 21*	22	.97*	
2.78	4.54	0.72	5.11	5.07*
4.07	3.88	0.83	3.59	9.21*
	Mean 7.60 8.68 9.32 4.14 224	7.60 2.27 8.68 2.31 9.32 2.08 4.14 2.63 224.21*	Mean         SD         Mean           7.60         2.27         6.25           8.68         2.31         7.01           9.32         2.08         7.01           4.14         2.63         5.51           224.21*         22           2.78         4.54         0.72	Mean         SD         Mean         SD           7.60         2.27         6.25         2.17           8.68         2.31         7.01         2.52           9.32         2.08         7.01         2.68           4.14         2.63         5.51         2.21           224.21*         22.97*           2.78         4.54         0.72         5.11

\* p < .001

Table 4 Pearson Correlations Between Measures of Temporal Experience and Causal Attributions for Affiliation Success and Failure

Attribution	Continuity	Time <u>Utilization</u>	Optimism	Hopeless- ness
Success				
Ability Effort Context Luck Internality Composite Stability Composite	.03 .17* .03 31** te .26**	.08 .20** .03 17* .22** .05	.08 .20** 00 45** .41** .23**	.02 11 03 .36** 24** 19**
Ability Effort Context Luck Internality Composite Stability Composite	06 .10 21** 26** te .25** 09	04 .04 19** 11 .16* 12	10 .01 12 26** .14* 01	.11 05 .17* .28** 19**

<sup>\*</sup> p < .05 \*\* p < .01

## References

- Beck, A. T., Weissman, A., Lester, D., and Trexler, L. The measurement of pessimism: The hopelessness scale. <u>Journal of Consulting and Clinical Psychology</u>, 1974, 42, 861-865.
- Braley, L. S. and Freed, N. H. Modes of temporal orientation and psychopathology.

  <u>Journal of Consulting and Clinical Psychology</u>, 1971, <u>36</u>, 33-39.
- Cottle, T. J. and Pleck, J. H. Linear estimations of temporal extension: The effect of age, sex, and social class. <u>Journal of Personality Assessment</u>, 1969, 33, 81-93.
- Davids, A. Ego functions in disturbed and normal children. <u>Journal of</u> Consulting and Clinical Psychology. 1969, 33, 61-70.
- Davids, A., Kidder, C., and Reich, M. Time orientation in male and female juvenile delinquents. <u>Journal of Abnormal and Social Psychology</u>. 1962, 64, 239-240.
- Dilling, C. A. and Rabin, A. I. Temporal experience in depressive states and schizophrenia. Journal of Consulting Psychology, 1967, 31, 604-608.
- Epley, D. and Ricks, D. R. Foresight and hindsight in the T.A.T. <u>Journal of Projective Techniques</u>, 1963, <u>27</u>, 51-59.
- Getsinger, S. H. Temporal relatedness: Personality and behavioral correlates.

  Journal of Personality Assessment, 1975, 39, 405-408.
- Goldstone, S. and Goldfarb, J. L. Time estimation and psychopathology.

  <u>Perceptual and Motor Skills</u>, 1962, <u>15</u>, 28.
- Heimberg, L. <u>Development and Construct Validation of an Inventory for the Measurement of Future Time Perspective</u>. Unpublished Master's Thesis, Vanderbilt University, 1961.
- Klineberg, S. L. Future time perspective and the preference for delayed reward. <u>Journal of Personality and Social Psychology</u>, 1968, <u>8</u>, 253-257.
- Koenig, F., Swanson, W. and Harter, C. Future orientation and social status. Perceptual and Motor Skills, 1980, 51, 927-930.
- Lefcourt, H. M., Von Baeyer, C. L., Ware, E. E., and Cox, D. J. The multidimensional-multiattributional causality scale. <u>Canadian Journal of Behavioral Science</u>, 1979, 11, 286-304.
- LeShan, L. Time orientation and social class. <u>Journal of Abnormal and Social Psychology</u>, 1952, <u>47</u>, 589-592.
- Nisan, M. Dimension of time in relation to choice behavior and achievement orientation. <u>Journal of Personality and Social Psychology</u>, 1972, <u>21</u>, 175-182.

- Platt, J. J. and Eisenman, R. Internal-external control of reinforcement, time perspective, adjustment, and anxiety. <u>Journal of General Psychology</u>, 1968, 79, 121-128.
- Rapaport, D. Projective techniques and the theory of thinking. <u>Journal of</u> Projective Techniques, 1952, 16, 269-275.
- Rapaport, D. On the psychoanalytic theory of affects. <u>International Journal</u> of Psychoanalysis, 1953, 34, 177-198.
- Roos, P. and Albers, R. Performance of alcoholics and normals on a measure of temporal orientation. Journal of Clinical Psychology, 1965, 21, 34-36.
- Rychlak, J. E. Manifest anxiety as reflecting commitment to the psychological present at the expense of cognitive futurity. <u>Journal of Consulting and Clinical Psychology</u>, 1972, 38, 70-79.
- Rychlak, J. F. Manifest anxiety as reflecting commitment to the psychological present at the expense of cognitive futurity. <u>Journal of Consulting and Clinical Psychology</u>, 1972, 38, 70-79.
- Shostrom, E. L. Time as an integrating factor. In Buhler, C. and Massarik, F. (eds.), The course of human life: A study of goals in the humanistic perspective. New York: Springer, 1968.
- Stein, K. B., Sarbin, T. R. and Kulik, J. A. Future time perspective: Its relation to the socialization process and the delinquent role. <u>Journal</u> of Consulting and Clinical Psychology, 1968, 32, 257-264.
- Thayer, S., Gorman, B. S., Wessman, A. E., Schmeidler, G. and Mannucci, E. G. The relationship between locus of control and temporal experience. Journal of Genetic Psychology, 1975, 126, 275-279.
- Tolor, A., Brannigan, G. G., and Murphy, V. M. Psychological distance, future time perspective, and internal-external expectancy. <u>Journal of Personality Assessment</u>, 1970, 34, 283-294.
- Weiner, B. Theories of motivation: From mechanism to cognition. Chicago: Rand McNally, 1972.
- Weiner, B. A theory of motivation for some classroom experiences. <u>Journal of</u> Educational Psychology, 1979, 71, 3-25.
- Weiner, B. The role of affect in rational (attributional) approaches to human motivation. Educational Researcher, 1980, 9, 4-11.
- Wessman, A. E. and Ricks, D. F. Temporal covariation of affective states in male and female students. American Psychologist, 1959, 14. (Abstract)
- Wessman, A. E. Personality and the subjective experience of time. <u>Journal of</u> Personality Assessment, 1973, 37, 103-114.

- Winer, B. J. Statistical Principles in Experimental Design (Second Edition). New York: McGraw-Hill, 1971.
- Yonge, G. D. Time experiences, self-actualizing values, and creativity. Journal of Personality Assessment, 1975, 39, 601-606.

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