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ABSTRACT

School achievement attributions for success and failure were examined for American and Polish preadolescents between the ages of 12 and 13 years. The American sample included 115 preadolescents (53 males and 62 females), and the Polish sample included 64 children (34 males and 30 females). The American subjects came from a suburban racially heterogeneous school district near Cincinnati (Ohio), and the Polish subjects were located in the state schools of Gdansk. Data were obtained from both subject groups during the 1987-88 school year. The construct validity for a revised version of the Multidimensional Multiattribution Causality Scale of H. M. Lefcourt and others was studied. While significant differences between the two cross-national samples and within the eight subscales were reported, significant correlations of the rank orderings of the eight subscale means among the American and Polish samples were believed to be evidence for the construct validity of the revised instrument. Additional correlational analyses contrasted these samples with a sample of 87 Anglo and 64 Hispanic American adolescents responding to the original instrument. Since the data support predictions based on the self-worth motive of M. V. Covington (1984), it is argued that construct validation of the revised instrument was achieved. Since construct validity was found in both samples, it is suggested that a successful translation was accomplished. Seven tables and one bar graph present study data. (Author/SLD)

MULTIDIMENSIONAL FACETS OF PERSONAL CONTROL PERCEPTIONS: A CROSS-NATIONAL VALIDATION ANALYSIS.

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Multidimensional Facets of Personal Control Perceptions: A Cross-national Validation Analysis.

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Abstract. This study examines school achievement attributions for success and failure in American and Polish pre-adolescents between the ages of 12 and 13. The American sample of 115 pre-adolescents consisted of 53 males and 62 females, and the Polish sample of 64 children had 34 males and 30 females. Construct validity for a revised version of Lefcourt's et al (1979) **Multidimensional Multiattribution Causality Scale** is presented. While significant differences between the two cross-national samples and within the eight subscales are reported, significant correlations of the rank orderings of the eight subscale means among the American and Polish samples are believed to be evidence for construct validation of the revised instrument. Additional correlational analyses are presented contrasting our samples with a sample of Anglo and Hispanic American adolescents who responded to Lefcourt's original instrument. Since the data support predictions based on Covington's **Self-worth Motive**, we believe that construct validation of the revised instrument was achieved. Since this occurred in both American as well as Polish samples, we also believe that a successful translation was accomplished.

Multidimensional Facets of Personal Control Perceptions:

A Cross-national Construct Validation Analysis.

Objectives. The present study is an outgrowth of previous longitudinal and cross-sectional analyses of children's perceptions of personal control (See Sherman & Hofmann, 1979; Sherman, 1984; Sherman & Hofmann, 1988; Sherman, Hofmann & Omera, 1988; Sherman, Hofmann & Wagoner, 1988; Kulas, 1988). Our earlier analyses, as will as other literature, suggested that the construct which we were studying, was not simply a "generalized expectancy" (Rotter, 1990) for internal and external locus of control, but rather it represented personal perceptions of causality that are both multi-attributional and multi-dimensional. Lefcourt, et al (1979) has designed the 48-item Likert-scaled **Multidimensional Multiattributional Causality Scale (MMCS)** for adult populations (See also Chandler et al., 1981). We have adapted this instrument for use with English speaking children, and also had it translated into three other languages (Polish, Dutch and Italian) so that we could examine cross-national comparisons of children's developing perceptions of personal control perceptions. This study is a presentation of preliminary data comparing Polish and American children's responses to our version of the **MMCS**. We are attempting to demonstrate construct validity for our revised and translated versions of the instrument. By "construct validity" we mean the ability of the **MMCS** to measure a hypothetical construct, multiple attributions and dimenisions of causality.

Perspective. Our psychological perspective, a cognitive and attributional one, is based on the earlier work of Heider (1958) and Weiner (1980 & 1986). While we acknowledge the earlier social learning approach of Rotter (1966; 1990) who first coined the term "locus of control," we maintain that personal perceptions of causality are primarily a cognitive process of attributing causality to multiple elements either located in or outside the self system. Inside the self system are two attributes including **ability** and **effort** ("internal locus of control"), while outside the self are **difficulty of task** (Context) and **luck** or chance ("external locus of control"). Effort and Luck are thought to be unstable or variable attributes, while ability and difficulty are thought to be stable elements (See Table 1 for a breakdown of the attribution model). These perceptions are also thought to vary according to the situation: causal perceptions might vary according to the conditions of **success** or **failure**. The context within which success or failure is located (eg. school **achievement** vs **social** relationships --**Affiliation**) is also an important element in this multi-dimensional model.

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Put Table 1 here

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Lefcourt et al's (1979) instrument is structured into a 16-cell model where locus of control (**Internal** vs **External**) by Stability (**stable** vs **unstable**) by Situation (**Success** vs **Failure**) by Context (School **Achievement** vs Social Relationships or

Affiliation) are the primary elements. Each cell is addressed by three Likert-like items scaled from 0 (strongly disagree) to 4 (strongly agree) - 48 items in all. Each 3-item cell (subscale) could range from 0 to 12 points indicating strength of affirmation (a high score) for a particular complex of attribution dimensions. See **Table 1** for the 16-cell model and a list of the 3-item subsets.

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PUT TABLE 2 HERE

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Methods. The present study examines the eight cells associated with school achievement attributions of American and Polish pre-adolescents between the ages of 12 and 13. Our American sample of 115 pre-adolescents consisted of 53 males and 62 females. These subjects have been previously discussed in Sherman, Hofmann & Wagoner (1988). They came from a suburban racially heterogeneous school district near Cincinnati and the data were obtained during the 1987/88 school year. The Polish sample of 64 children had 34 males and 30 females. They were located in the State schools of Gdansk, Poland and the data were obtained during the 1987/88 year. Thus, both samples contributed responses to the MMCS at approximately the same time.

While significant differences between the two cross-national samples and within the eight subscales are reported, significant correlations of the rank orderings of the eight subscale means among the American and Polish samples are believed to be evidence for construct validation of the revised instrument. Additional

correlational analyses are presented for a sample of Anglo and Hispanic American adolescents who responded to Lefcourt's original **MMCS** instrument (Powers & Wagner, 1983).

Results. A multivariate analysis of variance contrasting the between subjects variables of gender and cross-national sample (Polish vs American), and the within subjects variable of the eight attribution subscales obtained a statistically significant interaction between the 8 success/failure attributions and gender ($F(7,1225)=15.48$, $p<.003$) (See Tables 3 & 4). Powers & Wagner's (1983) data for a similar sample of Anglo and Hispanic high school students is also presented in Table 5, however we were not able to subject their data to a similar statistical analysis. An attempt was made to graphically portray these results in a histogram form. Inspection of the bar graph contained in Figure 1 reveals an interesting and orderly pattern which lead us to consider an additional correlational analysis. Statistically significant correlations of the eight ranked subscale means were obtained among all samples (**r`s** ranged from .75 to .97, $p<.02$) (See Table 6).

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Put Tables 3 through 6 and Figure 1 here

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Significance. The data indicate that while samples may have had significantly different mean subscale scores, the pattern of responses remained essentially the same for American and Polish children. All of the samples' strongest responses for school achievement successes and failures were attributed to personal

effort, an internal locus of control perception. The third highest ratings were associated with success and ability, indicating some modesty on the part of our respondents. Their weakest responses indicated that successes or failures were attributed to the external attribute of luck, followed by failure and ability. Perry & Penner's (1990) recent discussion regarding primary "...determinants of uncontrollability... (p. 265)" suggest that negative outcomes are the primary determinants of uncontrollability. They suggest that under the condition of failure an external locus of control is logically inferred because the person does not possess the resources (ie., ability) necessary to produce success. Thus there is discussion in the literature challenging the notion of "ability" as an internal attribute (See Janoff-Bulman, 1979, as well as Rothbaum et al, 1982). We believe that this pattern of responses support Covington's (1984)"egotism hypothesis," which is based on a theory of positive self-image which he further describes as the **self-worth motive**. Cognitive perceptions which enhance the self (ego) are hypothesized to be the strongest attributions. This model is strongly influenced by Heider's (1958) and Weiner's (1980; 1986) attribution theory which is the basis upon which Lefcourt et al's (1979) **MMCS** instrument was developed. Inasmuch as our results obtained a pattern which would be predicted by this theory, we believe that this is evidence of construct validity for our revised version of the instrument. Furthermore, since that pattern was maintained in a sample of Polish children, we believe that we not only have accomplished a

valid translation, but that the construct is generalizable and continues to operate in a distinctly different culture of young adolescents. Future use of the revised and translated version of the **MMCS** instrument can be accomplished with greater confidence now that we have demonstrated this construct validity.

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TABLE 1

INTERNAL/EXTERNAL LOCUS OF CONTROL ATTRIBUTES
IN THE CONDITIONS OF SUCCESS AND FAILURE

LOCUS OF CONTROL	CONDITION			
	SUCCESS		FAILURE	
	STABLE	UNSTABLE	STABLE	UNSTABLE
INTERNAL LOCUS	ABILITY	EFFORT	ABILITY	EFFORT
EXTERNAL LOCUS	CONTEXT	LUCK	CONTEXT	LUCK

TABLE 2

MMCS ITEMS ASSOCIATED WITH EACH ATTRIBUTE IN THE CONDITION OF SUCCESS AND FAILURE FOR ACHIEVEMENT AND AFFILIATION SITUATIONS.

	CONDITION			
LOCUS	SUCCESS		FAILURE	
SITUATION	STABLE	UNSTABLE	STABLE	UNSTABLE
INTERNAL LOCUS	ABILITY	EFFORT	ABILITY	EFFORT
ACHIEVEMENT ITEMS	11,27,43	9,25,41	3,19,35	1,17,33
EXTERNAL LOCUS	CONTEXT	LUCK	CONTEXT	LUCK
ACHIEVEMENT ITEMS	6,22,38	8,24,40	14,30,46	16,32,48
INTERNAL LOCUS	ABILITY	EFFORT	ABILITY	EFFORT
AFFILIATION ITEMS	15,31,47	13,29,45	7,23,39	5,21,37
EXTERNAL LOCUS	CONTEXT	LUCK	CONTEXT	LUCK
AFFILIATION ITEMS	2,18,34	4,20,36	10,26,42	12,28,42

From Lefcourt et al, (1979) **Multidimensional Multiattributional Causality Scale.**

Table 3

ACHIEVEMENT Data for Polish and American 12-yr-Olds:

Mean Attribution scores.

		Sample							
		Polish				American			
Attribution X	Success/	Gender				Gender			
	Failure	Male		Female		Male		Female	
S/FATT	n	34	Rk[a]	30	Rk	53	Rk	62	Rk
Ability	S	6.85	3	7.30	3	6.50	3	5.59	3
	F	5.47	7	6.10	7	5.57	5	5.50	4.5
Effort	S	8.38	1	9.36	1	7.66	1	8.94	2
	F	8.20	2	8.96	2	7.50	2	9.16	1
Context	S	6.27	5	6.67	5	5.50	6	5.42	6
	F	6.00	6	7.03	4	6.42	4	5.50	4.5
Luck	S	6.68	4	6.50	6	5.15	7	4.84	7
	F	4.85	8	4.93	8	4.32	8	3.35	8

[a]Ranked values based on mean scores.

Table 4

ACHIEVEMENT Attribution Ratings in the Success/Failure conditions (S/FATT) x Sample (Polish vs American) x gender.

Source	df	MS	F	p<
Sample	1	200.71	18.19	.001
Sex	1	19.68	1.78	ns
Sample x sex	1	24.75	2.24	ns
error	175	11.03	-	-
S/FATT	7	334.65	67.23	.001
S/FATT x Sample	7	8.61	1.73	ns
S/FATT x Sex	7	15.48	3.11	.001
S/FATT x Sample x Sex	7	8.31	1.67	ns
error	1225	4.98	-	-

Table 5

ACHIEVEMENT Data for Anglo and Hispanic High School Students from Powers and Wagner's (1983) Study.

		Sample			
		Anglo (n=87)		Hispanic (n=64)	
Attribution X **S/FATT**	Success/ Failure	Mean	Rk[a]	Mean	Rk
Ability	S	7.99	3	8.58	3
	F	5.13	7	6.81	4
Effort	S	9.05	2	10.02	1
	F	9.77	1	9.22	2
Context	S	6.17	4	5.88	5
	F	6.11	5	5.53	6
Luck	S	5.64	6	4.72	7
	F	3.93	8	4.08	8

[a]Ranked values based on mean scores.

Table 6

Inter-correlation matrix of ranked means for all samples.

Sample	1	2	3	4	5	6
1. Polish males	1.00					
2. American males	.79	1.00				
3. Polish females	.90	.93	1.00			
4. American Males	.75	.97	.87	1.00		
5. Hispanics	.79	.93	.83	.93	1.00	
6. Anglos	.90	.86	.95	.86	.83	1.00

r's greater than .75 are statistically significant ($p<.02$).

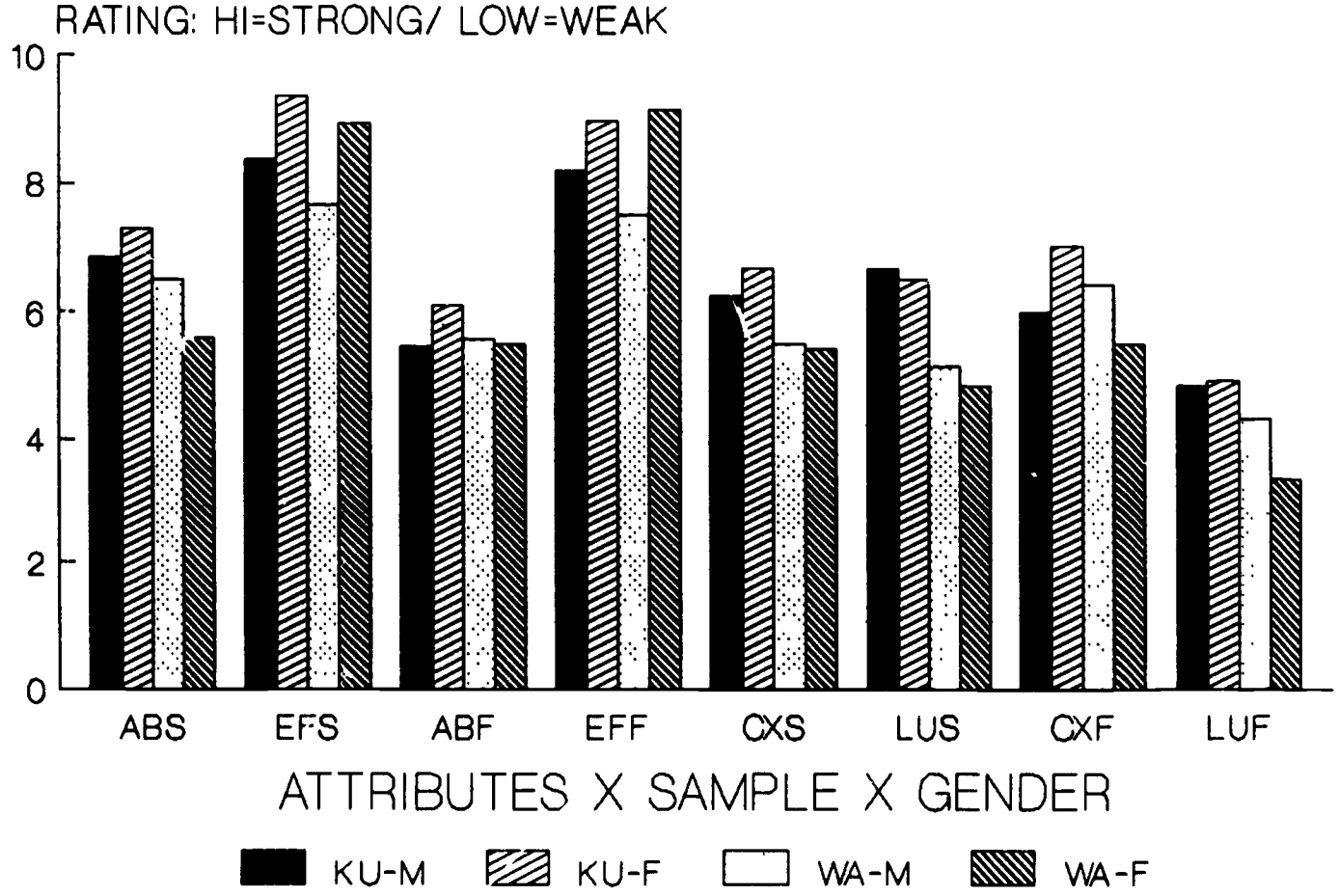
Table 7

ACHIEVEMENT Data for Anglo and Hispanic High School Students from Powers and Wagner's (1983) Study.

		Samples											
		[Powers & Wagoner, 1983]				[Chandler et al., 1981]							
		USA-Anglo (n=87)		Hispanic (n=64)		India (n=78)		Japan (n=250)		S.Africa (n=131)		Yugo (n=99)		USA (n=126)	
ATTRIBUTE	S/F	M	Rk[a]	M	Rk	M	Rk	M	Rk	M	Rk	M	Rk	M	Rk
AB	S	7.99	3	8.58	3	10.16	2	6.89	4	8.82	3	7.11	3	9.36	2
	F	5.13	7	6.81	4	4.37	8	5.03	6	4.67	8	4.14	6	4.35	7
EF	S	9.05	2	10.02	1	10.33	1	8.77	2	9.47	1	9.29	1	9.83	1
	F	9.77	1	9.22	2	9.36	3	9.69	1	9.37	2	8.79	2	8.80	3
CT	S	6.17	4	5.88	5	5.30	7	4.59	8	5.43	6	4.97	8	5.66	5
	F	6.11	5	5.53	6	6.56	5	5.00	7	6.82	4	5.63	5	5.70	4
LK	S	5.64	6	4.72	7	6.59	4	7.10	3	6.67	5	6.39	4	5.24	6
	F	3.93	8	4.08	8	6.50	6	5.44	5	5.06	7	5.09	6	4.93	8

[a]Ranked values based on mean scores.

KULAS/WAGONER ACHIEVEMENT ATTRIBUTES
KULAS' 11'S, TIME 2: WAGONER'S 12/13'S



ATTRIBUTES X SEX (P<.001)
SAMPLE (P<.001)