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Multidimensional locus of control and Machiavellianism in Italian and West German students: similarities and differences

In recent decades, the relationship between Machiavellianism and locus of control has received increasing attention in psychological literature. Presented below are the results of various studies conducted to determine correlations between these variables, complete with statistical information concerning gender-specific differences.

Minton (1967) has mentioned a significant correlation between locus of control and Machiavellianism ($r=0.43$, $p<0.01$). In addition, a low but consistent correlation between I-E scores (internal versus external locus of control) and Mach scores was found by Miller and Minton (1969). In 1970, Christie and Geis reported a significant positive correlation between Machiavellianism and external locus of control. Furthermore, significant results are reported by Solar and Bruehl (1971). Using Rotter's Internal versus External (I-E) Locus of Control scale, Russell (1974) found a positive correlation between Machiavellianism and externality ($r=0.25$, $p<0.05$), pertinent only to male respondents. Similarly, Prociuck and Breen (1976) noted a positive correlation between I-E scores and Mach IV scores ($r=0.37$, $p<0.05$) for males only. Maroldo et al. (1976), using a modified Mach IV scale, observed a small but significant correlation between Machiavellian attitudes and external locus of control ($r=0.19$, $p<0.05$), and noted no sex differences.

In a study conducted on Italian samples, Galli and Nigro (1983a) obtained significant positive correlation between Mach IV scores and

I-E scores for men as well as for women ($r=0.40$, $p<0.01$). In an earlier study, Krampen (1980), administering the Mach scale and the Nowicki-Duke scale to West German undergraduates, reported significant negative correlation between Machiavellianism and internality.

In opposition to the virtually homogeneous results obtained by using Rotter's I-E scale, the use of Levenson's Internal, Powerful Others, and Chance scales generated contradictory results. Levenson and Mahler (1975) found a significant positive correlation between Chance scale and Mach IV scale ($r=0.45$, $p<0.05$) for males only. For females, the authors obtained a negative correlation between Internal scale and Mach IV scale ($r=0.56$, $p<0.01$). Compare this with Prociuck and Breen (1976): using Levenson's scales, these researchers found a positive correlation between Mach scale and Powerful Others scale ($r=0.41$, $p<0.01$) for males only. No significant correlations were found for the female portion of the samples under scrutiny.

In a study conducted in 1981, Krampen reported a positive correlation between Mach scores and I-E scores, but a negative one between Mach scale and both P and C scales. In this study, no relation was found between Machiavellianism and I scale. In the same year, Paulhus and Christie (1981) also reported a positive correlation between Mach scores and I-E scores, but a negative one between Machiavellianism and externality; this latter correlation was assessed using the Spheres of Control scales by Paulhus and Christie (1981). The authors defined as 'paradoxical' the finding that the high Machiavellian is external. According to Paulhus and Christie (1981), '...assessment of perceived control with a single measure (e.g. Rotter's scale) will not adequately characterize the individual and could conceivably be a misleading indicator of perceived control in a specific setting. Rather, the individual should be characterized by a *control profile*, a pattern of expectancies that he brings into play in confronting the world' (p. 167).

In summary, it appears that whenever the locus of control is conceived as unidimensional and assessed by an I-E scale, results generally indicate a positive relationship between Machiavellianism and externality. In opposition, by using multidimensional measures of locus of control, one discovers that the relation between these two variables still remains an ambiguous one. The disparity of the findings concerning the relationship between Machiavellianism and internal versus external locus of control justifies further research.

The purpose of the following comparative study is to investigate

similarities and differences between Italian and West German undergraduates in the relationship between Machiavellian attitudes and locus of control. To achieve the correlation coefficient, the following method was employed.

Method

Subjects and procedure

One hundred and seventy-one Italian students (eighty males and ninety-one females) at the University of Naples, and 176 West German students (sixty-eight males and 108 females) at the University of Trier, participated voluntarily in the study.

The mean age of the Italian samples was 23.75 for men and 21.24 for women. Thus, the mean age of the combined samples was 22.42, ranging from eighteen to twenty-eight years.

In comparison, the mean age for the German samples was 23.46 for men, 21.78 for women and 22.13 for the combined samples, ranging from nineteen to twenty-nine years.

Both the Italian version of Christie's Mach IV scale (Galli and Nigro, 1983b), and the Italian version of Levenson's I, P and C scales (Galli and Nigro, 1983c), were administered.

Both the German adaptation of the Mach IV scale, which follows mainly the work of Cloetta (1974), and the German version of the I, P and C scales (Krampen, 1981), were administered.

Results

The means and the standard deviations of the two questionnaires for both Italian and German students, and for all subjects, men and women, are presented in Table 1.

Correlations of Mach IV scores and I, P and C scores are reported in Table 2 and in Table 3 for the Italian and the German samples respectively.

As shown in Tables 2 and 3, for the Italian samples Machiavellianism and internality are negatively correlated, for men as well as for women. The correlations between Mach IV scores and P

TABLE 1
Means and standard deviations for Mach IV scale and I, P, C scales

Scores	All subjects		Men		Women	
	Italian	German	Italian	German	Italian	German
<i>N</i>	171	176	80	56	91	108
Mach IV						
M	85.64	81.37	89.03	88.17	82.66	79.17
SD	13.27	11.01	12.60	10.81	13.13	9.04
I scale						
M	34.09	33.90	34.05	33.50	34.12	33.85
SD	6.15	4.41	6.30	4.25	6.02	4.59
P scale						
M	14.60	21.13	15.20	21.39	14.07	21.13
SD	8.27	4.99	8.73	4.84	7.80	5.08
C scale						
M	18.45	24.85	19.08	25.50	17.90	24.89
SD	9.11	5.00	8.73	6.07	9.39	4.17

TABLE 2
Correlations of Mach, I, P, C in the Italian sample (*N* = 171)

Sex	<i>N</i>	I	P	C
M	80	-0.27*	0.47***	0.28*
F	91	-0.22*	0.47***	0.30**
M + F	171	-0.24**	0.47***	0.30***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

TABLE 3
Correlations of Mach, I, P, C in the German sample (*N* = 176)

Sex	<i>N</i>	I	P	C
M	56	-0.00	0.16	0.07
F	108	-0.32***	0.30***	0.09
M + F	176	-0.21**	0.29***	0.09

** $p < 0.01$; *** $p < 0.001$.

scores, and between Mach IV scale and C scale, respectively, are positive and consistent for both sexes.

As regards the German samples, no significant correlations between Mach IV scores and I scores, or between Mach IV scores and both P and C scores, were found for men.

A negative correlation between Mach IV scale and I scale, and a positive correlation between Mach IV scores and P scores, were obtained for women. No significant correlation between Machiavellian scale and Chance scale was found.

A negative correlation between Mach IV and I scale, as well as a positive correlation between Mach IV scores and P scores, was obtained for the German combined samples (M + F).

For the total sample of $N = 347$ Italian and West German university students, a negative correlation between Machiavellianism and internality was found. Positive correlations between Mach scale scores and Powerful Others scale scores, as well as between Mach scale and Chance scale, were obtained. These results are presented in Table 4.

TABLE 4
Correlations of Mach, I, P, C in the total sample of $N = 347$
Italian and West German university students

	Mach	I	P	C
Mach	1.00	-0.22***	0.28***	0.17**
I		1.00	-0.19***	-0.17**
P			1.00	0.53***
C				1.00

** $p < 0.01$; *** $p < 0.001$.

ANOVAs were conducted with the independent variables 'sex' and 'nationality' for the variables Mach, I, P, and C. Only Machiavellianism revealed major gender-related effects. By comparison, significant main effects of the factor 'nationality' for Mach scores and for both P and C scores were found.

A MANOVA (following Pillai and Jayachandran, 1967) was calculated with the factors 'sex' and 'nationality' showing as significant. This can be explained by sex differences in Mach scores.

The significant F value for the variable 'nationality' was determined by differences on both P and C scales scores.

Results of ANOVAs and MANOVA are presented in Table 5.

TABLE 5
Results of the MANOVA and the ANOVAs with the independent variables 'sex' and 'nationality' for the dependent variables: 'Mach', 'I', 'P' and 'C'

Variable	F-scores of the ANOVAs			Sample means					
	Sex	Nationality	Sex × nat.	Sex		Nationality			
				Female (N = 199)	Male (N = 148)	Italian (N = 171)	German (N = 176)	Grand mean (N = 347)	
Mach	34.81***	3.71*	1.05	Mach	80.8	88.7	85.6	81.4	84.0
I	0.11	0.41	0.05	I	34.0	33.8	34.1	33.9	33.9
P	0.89	78.37***	0.32	P	17.9	17.8	14.6	21.1	17.8
C	1.39	67.66**	0.17	C	21.7	21.8	18.5	24.9	21.7
MANOVA-F:	10.35***	43.26***	0.93						

* $p < 0.07$; *** $p < 0.001$.

As pointed out by many researchers, results revealed gender differences: males reported higher Mach scores than females did. On the whole, Italian students, compared to German students, had significantly higher scores on Mach IV scale.

No differences on the I scale were found. Consistent dissimilarities on both P and C scales were found. Italian students reported lower scores on the two scales than German undergraduates did.

German students differed from the comparison group, by showing a shift towards more Chance and Powerful Others orientations on Levenson's scales.

Discussion

The results confirm previous findings about the relationship between Machiavellianism and external locus of control.

However, this commonly observed positive correlation was evaluated by some authors (e.g. Paulhus and Christie, 1981) as a conceptually contradictory one. According to these authors: 'Since the Machiavellianism scale was designed with interpersonal control as the topic of concern, a *negative* correlation between Machiavellianism and externality should be expected. Persons who are effective in manipulating others in experimental situations surely do not perceive themselves as passive pawns of powerful others or hapless victims of chance. We suspected that this paradoxical finding might be reconciled if one could separately assess perceived interpersonal control.' (p. 166)

Is the relationship between Machiavellianism and externality really a paradoxical one? Using a multidimensional measure of locus of control, we confirmed this relationship. However, we think that the positive correlation between Machiavellian attitudes and external locus of control may be explained as follows.

What Paulhus and Christie state refers to interpersonal control, e.g. to a specific dimension of locus of control, only. Locus of control is a more complex construct, and it is not reducible to interpersonal control only.

Ability in manipulating other people does not necessarily reflect internal control expectancies. In other words, Machiavellian people may expect to have control over other people's lives and may not feel that they have control over their own lives at the same time.

In conclusion, we think that the relationship between

Machiavellianism and external locus of control is not a paradoxical one. However, this relation appears a complex one and requires more extensive and careful research.

References

- Cloetta, B. (1974). 'Neue Daten zum MK.' Konstanz: Arbeitsbericht 18 aus dem Sonderforschungsbereich 23 an der Universität Konstanz.
- Christie, R. and Geis, F.L. (1970). *Studies in Machiavellianism*. New York: Academic Press.
- Galli, I. and Nigro, G. (1983a). 'Relationship between Machiavellianism and External Control among Italian Undergraduates.' *Psychological Reports*, 53: 1081-1082.
- Galli, I. and Nigro, G. (1983b). *Versione Italiana della Scala MACH IV. Manuale di Istruzioni*. Firenze: Organizzazioni Speciali.
- Galli, I. and Nigro, G. (1983c). 'Versione Italiana dell' IPC Scales di Levenson.' Unpublished manuscript.
- Krampen, G. (1980). 'Machiavellismus und Kontrollüberzeugung als Konstrukte der generalisierten Instrumentalitätserwartungen.' *Psychologische Beiträge*, 22(5): 128-144.
- Krampen, G. (1981). *IPC-Fragebogen zu Kontrollüberzeugungen ('locus of control') - Deutsche Bearbeitung der IPC-Scales*. Göttingen: Verlag für Psychologie (C.J. Hogrefe).
- Levenson, H. and Mahler, I. (1975). 'Attitudes towards Others and Components of Internal-External Locus of Control.' *Psychological Reports*, 36: 209-210.
- Maroldo, G.K., Flachmeier, L.C., Johnston, L.K., Mayer, J.L., Peter, M.I., Reitan, E.J. and Russell, K.L. (1976). 'Relationship between Machiavellianism, External Control and Cognitive Style among College Students.' *Psychological Reports*, 39: 805-806.
- Miller, A.G. and Minton, H. (1969). 'Machiavellianism, Internal-External Control and the Violation of Experimental Instructions.' *Psychological Record*, 19: 369-380.
- Minton, H.L. (1967). 'Power as Personality Construct.' In B.A. Maher (ed.), *Progress in Experimental Personality Research*. New York: Academic Press.
- Paulhus, D. and Christie, R. (1981). 'Spheres of Control: An Interactionist Approach to Assessment of Perceived Control.' In H.M. Lefcourt (ed.), *Research with the Locus of Control Construct*. New York: Academic Press.
- Pillai, K.C.S. and Jayachandran, K. (1967). 'Power Comparison of Tests of Two Multivariate Hypotheses based on Four Criteria.' *Biometrika*, 54: 195-210.
- Prociuck, T.J. and Breen, L.J. (1976). 'Machiavellianism and Locus of Control.' *Journal of Social Psychology*, 98: 141-142.
- Russell, G.W. (1974). 'Machiavellianism, Locus of Control, Aggression, Performance and Precautionary Behaviour in Ice Hockey.' *Human Relations*, 27: 825-837.
- Solar, D. and Bruehl, D. (1971). 'Machiavellianism and Locus of Control: Two Conceptions of Interpersonal Power.' *Psychological Reports*, 29: 1079-1082.

'Locus of control' multidimensional et Machiavélisme chez étudiants italiens et allemands: ressemblances et différences

L'étude présentée dans cet article décrit une recherche cross-culturelle sur la relation entre Machiavélisme et locus of control. L'échelle Mach IV de Christie et le questionnaire I, P, C de Levenson ont été passés par un échantillon de 171 étudiants italiens et par un échantillon de 176 étudiants allemands. Les résultats montrent des corrélations positives entre l'échelle Mach IV et l'échelle P, et entre l'échelle Mach IV et l'échelle C, à la fois pour l'échantillon italien et pour l'échantillon allemand. On a trouvé des différences pour ce qui concerne la relation entre l'échelle Mach IV et l'échelle I. Contrairement aux résultats observés sur l'échantillon italien, aucune corrélation significative n'a été observée entre l'échelle de Machiavélisme et l'échelle I sur l'échantillon allemand.

Dans l'ensemble, les résultats montrent une corrélation positive entre Machiavélisme et externalité. Ressemblances et différences entre les deux échantillons ont été analysées.