

TYPE A BEHAVIOR THROUGH THE TAINTED LENSES OF A PERSONOLOGIST

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Abstract

The present study focuses on identifying personality variates of the TABP. The California Psychological Inventory and the Survey of Work Styles were administered on a number of 53 salesmen, seeking to evaluate the way a personality measure would predict behavioral indicators associated with TABP. The analysis suggests interesting correlational patterns and regression analysis has shown the possibility of delineating regression equations predicting the Type A/B distinction and five of the six behaviors associated with TABP, with percentages between 27% and 54% of the concept variance.

Key-words: *Type A behavior pattern, personality, CPI, SWS*

INTRODUCTION

Health psychology has focused extensively on the Type A Behavior Pattern (TABP), as one of the main psychological variables related by empirical evidence with Coronary Heart Disease (CHD) (Jenkins, Rosenman, & Zyzanski, 1974; Haynes, Feinleib, & Kannel, 1980; Dembroski, MacDougall, William, Haney & Blumenthal, 1985; Williams, Haney, Lee, Kong, Blumenthal, & Whalen, 1980; Culbertson & Spielberger, 1996; etc.), but also with health criteria outside of the heart disease arena, like smoking (Haynes & Feinleib, 1982), cocaine consumption (Ball, Carroll, Babor & Rounsaville, 1995), difficulty or impossibility to quit smoking (Caplan et al., 1975) and even cancer (Fletcher, 1989).

The aim of the present study is twofold. First, an important objective is to investigate the possibility of detecting TABP through the employment of a mainstream personality measure; the reason for this objective is the fact that parsimony and tight financial and time resources usually prohibit the usage of TABP detection measures in personnel selection, whereas personality measures are widely employed. Secondly, an

important objective was a more complete enunciation of specific behaviors and adjectival descriptions associated with TABP in a work environment; the CPI offers a perfect basis for this attempt, being one of the personality measures with significant power of behavioral prediction.

ABP and the work environment

Attitudinal and behavioral elements which form the basis of TABP are considered by some influential authors (Friedman & Rosenman, 1974) to be environment-specific, at least at the generation phase and this makes the work environment especially important. Statistics prove that the majority of white-collar workers are Type A and the situation gets even worse up the ladder, as for example Howard, Cunningham & Rechnitzer (1976) find in a study of 12 different companies that 61% are Type A, and 44% have been identified as the extreme Type A1. More recently, Gray, Jackson & Howard (1990) have found a percentage of Type As in exceed of 70% in managerial positions in organizations. In Romania, Pitariu (1998, 2000), and Țânculescu & Iliescu (2006) have also found that the percentage of Type A's exceeds, sometimes severely the percentage of Type B's in managerial positions.

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Friedman & Rosenman (1959) are credited with the paternity of the Type A concept. In their observations on patients suffering from coronary heart disease they have noted and described the chronic need of their patients to build ever more in ever less time, regardless of potential obstacles. Even though initially theorized as a personality type, the state of knowledge has rapidly evolved to today's stage where TABP is considered to be a behavioral pattern, based on the systemic and synergistic functioning of at least three types of behaviors, namely (a) a set of beliefs about the own self and about the world in general, (b) a set of values converging towards a strong motivation to work hard and to succeed and (c) a typical lifestyle and environment relation, based on competitiveness and a keen feeling for time pressure. While some authors extend these facets to as many as six different behaviors, others adopt a more holistic view, like Lazarus & Folkman (1984), who consider these three behaviors to be facets of the same phenomenon, functioning in different life contexts, but having a synergistic action in the work environment (Cooper & Payner, 1990).

TABP has usually been conceptualized as a psychological response to a challenging environment, even though very little attention has focused upon the way in which this response is not only affected by the environment, but also effects the environment on its part. Modern research suggests that the relationship between TABP and the work environment is much closer than traditionally considered, and that Type A employees could actually very well be contributing themselves to the generation of a Type A work environment (Cooper & Payne, 1990).

Kirmeyer & Briggers (1988) for example have run an observational and prospective study upon police officers, which has shown that Type A's differ from Type B's in the work environment through the fact that they perceive the environment and climate as being more challenging and thus invest more time for professional obligations, take in a heavier workload, spend more time working and travel more on their job; subsequently they also feel to have less leisure time.

As a result, Type A's systematically construct an occupational environment that keeps them alert, under time pressure and favors impatience. They initiate more work activities, finalize more activities and tend to simultaneously address more tasks; the direct consequence of this is that supervisors tend to

distribute more tasks towards them. The higher work involvement and significantly higher competitiveness of Type A's makes them more visible in the organization and leads to more favorable assessment of their person and performance, which again leads to more complicated and more diversified tasks.

Type vs. trait in TABP

The type/trait discussion is still as hot in contemporary psychology as it was 50 years back and is still more acute with regard to TABP. Strube (1989) builds a strong case in support of the type-theory for TABP, based not only on the literature review but also on statistical and empirical data. For example, even if they initially discuss also intermediary A1, A2 and X classes between the A and B extremes, Friedman & Rosenman (1974) later state that less than 10% of the population may be included in these intermediary scales and other authors either fail to prove the existence of a linear relationship between the intensity of TABP and the severity of CHD (Ward, Chesney, Swan, Black, Parker & Rosenman, 1985), or suggest that this inclusion may in fact be attributable to measurement errors rather than undetermined behavioral preferences of the subjects (Gangestad & Snyder, 2000). In face of the evidence that the Type A/ B distinction is based on a difference in quality and not intensity, the present study will discuss TABP as a class and not as a continuous variable, even though some of the statistics employed will definitely be based on continuous scores of scales and subscales.

METHOD

Data was collected from a number of 53 salesmen, with help of two structured questionnaires, the CPI-260 (California Psychological Inventory, Gough, 2005) and the SWS (Survey of Work Styles, Jackson & Gray, 1988, 1993). Personality traits assessed with the CPI were considered predictors in relation to TABP as assessed by the SWS. Regression analyses and the subsequent in-depth descriptive analysis focused on maximizing the predictive and descriptive value of the CPI in the detection of TABP. For better prediction, we also included the organizational level in the regression analysis, where suited.

Participants

The current research was run on a company active in the production and

distribution of fast moving consumer goods, and has focused mainly on the sales department. As previously studied, occupational stress is very salient in this type of work environment, characterized by tight objectives and a chronic need for immediate results. For example, a study by Srivastava & Sager (1999) has researched four personal characteristics which influence salespeople to adopt either problem-centered or emotionally derived coping strategies when confronted with stress, namely locus of control, social support, the wish for tenure in the present workplace and beliefs about one's own efficiency.

A number of 60 salesmen were included in the study, 7 of them however refused participation. For all the other participants questionnaires were deployed through self-administration, after thorough instruction. The final set of subjects comprises 53 persons: 33 males aged 19 to 46 years ($M=32.00$, $\sigma=6.13$) and 20 females aged 19 to 46 years ($M=31.20$, $\sigma=4.03$).

Measures

California Psychological Inventory, 260 items (Gough, 2005)

The CPI-260 has been extensively experimented and adapted to the Romanian culture (Pitariu, 1981, 1983, 2000; Pitariu & Albu, 1993; Pitariu & Iliescu, 2005; Pitariu, Iliescu, Tureanu & Peleașă, 2006) and is probably the most thoroughly researched personality measure in Romania, with comprehensive norms on, gender, age groups and a large number of professions.

The CPI measures 20 folk scales, grouped on 4 registers of personality functioning (Social performance, Self-management, Motivations and thinking style, Personal characteristics, Work-related measures), as well as a variable number of 6-20 secondary scales, built in the liberal tradition of open-source assessment systems. The CPI also condenses data from three vector scales into a cuboid model of personality and lifestyles.

However the CPI-260 was preferred in this study for a few practical reasons:

- a. The CPI is a very complex and comprehensive instrument, covering a large number of personality traits, grouped in a variety of dimensions;
- b. The CPI is a very robust measure, with scales that are not only criterion validated, but most of the time generated directly through an empirical procedure, which increases

the predictive validity of the scales tremendously;

- c. The CPI is based on a scientific model that exceeds trait theory; Gough's (1957, 1987) intention has never been to assess *personality traits* in the so often criticized meaning of the term, but has focused on *folk concepts*, i.e. on constructs used by people in daily life for describing behavioral tendencies;
- d. The CPI contains scales and dimensions (like the three-factor model) that largely exceed the *trait* stage, being assimilated with lifestyles, values, and attitude systems.

Survey of Work Styles (Jackson & Gray, 1988, 1993)

The SWS is a 96 item multidimensional measure, aiming at assessing TABP. The measure has been developed through a classical psychometric approach, based on concept analysis (Jackson, 1971, Wiggins, 1973). The SWS has only lately been adapted and normed in Romania (Iliescu & Țânculescu, 2005; Țânculescu & Iliescu, 2006), but has proven its qualities in many other studies. For example, Martin, Kuiper & Westra (1989) have found, using the SWS, a consistent relationship between TABP, depressive states and dysfunctional attitudes and concluded that TABP is a dysfunctional coping behavior, used by individuals in order to manage negative attitudes related to self esteem, thus avoiding depressive episodes. Kuiper, Martin & Olinger (1993) have found in their research that scores on the SWS are closely related to self esteem, negative affectivity and negative attitudes regarding own performance; somehow weaker correlations were found with inefficient adaptation strategies.

The SWS measures not only TABP as a dichotomous Type A/B variable but also six behaviors traditionally associated with TABP, namely impatience (IMP), Anger (ANG), Time urgency (TU), Work involvement (WI), Job dissatisfaction (JD), and Competitiveness (COM).

The SWS has been preferred above other, more established measures for the assessment of TABP, like the Jenkins Activity Survey and the Framingham Type A Scale, for a number of practical reasons:

- a. The SWS is superior to both the Jenkins Activity Survey and the Framingham Type A Scale with regard

to its correlation to the Rosenman Structured Interview, which is arguably the most reliable and valid measure of TABP (Byrne, Rosenman, Schiller, & Chesney, 1985); the SWS is thus considering its criterion validity (power of differentiation between Type A/B), and also other psychometric characteristics, like internal consistency, a very robust measure (Jackson & Gray, 1988; Mavrogiannis, 1986);

- b. The SWS is custom-tailored for usage in organizational settings, it does not have the general outlook on TABP other measures have but focuses on behaviors, attitudes and preferences in the work environment;
- c. The SWS is the only one of the established TABP measures that has been adapted, normed and researched in Romania.

Analysis

Both the California Psychological Inventory and the Survey of Work Styles have been well received by the respondents and have performed very well in the population of our study. Both are instruments that have been extensively validated in the Romanian culture. The California Psychological Inventory especially has a long-standing history of interesting studies (Pitariu, 1981, 1995, 2000; Albu, 1994; Albu & Pitariu, 1991, 1994, 1999; etc.). The SWS has been adapted only shortly in Romania, but has also been based on extensive empirical research (Iliescu & Țânculescu, 2006; Țânculescu & Iliescu, 2006).

Table 1 comprises statistical data describing the performance of the California Psychological Inventory in the present study. Even a passing comparison of these scores with the scores reported repeatedly for the Romanian population will show a consistent pattern of good psychometric performance. For example, when compared with the last reported data for Romania (Pitariu et al., 2006), calculated for the Romanian normative sample (N=3200), all means and standard deviations are in the same range and in most cases averages do not cross more than .50 on either side of the reported mean. The most

notable difference is for the Sn scale, which in our sample is much more consistent with the male norms for Romania. Alpha coefficients have the same pattern of consistency. Pitariu et al. (2006) have reported for the 20 folk scales Alpha coefficients in the range of .59 to .78, with a median of .69, whereas our data shows coefficients in the range .61 to .80, with a median of .71.

Table 2 shows the same type of psychometric data for the Survey of Work Styles and supports the same conclusions as for the California Psychological Inventory. The SWS scores for the participants in this study have comparable sizes and standard deviations as for the Romanian normative sample, reported by Iliescu & Țânculescu (2005) for a sample of N=1500. Alpha coefficients have been reported as ranging between .64 and .72, with a median of .83, whereas the present study exhibits Alphas in the range .62-.75, with a median of .81. One notable difference is the slightly increased average score for the general Type A scale, which suggests a greater percentage of A Type participants in our study, when compared with Romania's general population.

The main method of analysis employed in this study was based on judgmental and incremental inclusion of personality variables into regression models aimed at predicting either the dichotomous distinction between Type A/ Type B behavior pattern, or certain specific behavioral aspects of TABP.

Even though, as shown earlier, we strongly believe that TABP is in fact a dichotomous variable, we have used continuous scores in its measurement as well as in the subsequent analysis, mainly because the aim of this study was to empirically discover interactions. Cohen & Cohen (1983) state that statistical power associated with interaction effects is lower than that associated with principal effects; a regression analysis would thus ensure the larger statistical power, even more important in face of the rather small sample size. Moreover, it is clear that dichotomizing a variable that has previously been measured as continuous would certainly mean a substantial decrease in statistical power.

Table 1

Average raw scores, standard deviations and internal consistency coefficients for the CPI scales (N=53)

Scales	Nr. items	Average raw scores	Standard deviation	Alpha coefficients		
		Total (N=53)	Total (N=53)	Male (N=33)	Female (N=20)	Total (N=53)
Folk scales						
Do	36	21.62	5.86	.74	.75	.80
Cs	28	14.47	4.29	.66	.59	.64
Sy	32	16.44	4.29	.69	.68	.73
Sp	38	17.22	4.44	.62	.55	.68
Sa	28	14.75	3.93	.61	.61	.61
In	30	15.52	3.84	.75	.67	.67
Em	38	14.16	3.12	.64	.66	.65
Re	36	16.56	3.51	.71	.64	.68
So	46	21.61	5.20	.69	.78	.69
Sc	38	16.66	5.38	.84	.80	.78
Gi	40	15.41	5.38	.69	.76	.79
Cm	38	18.62	2.83	.69	.68	.71
Wb	38	14.54	4.05	.66	.78	.73
To	32	10.77	3.20	.71	.60	.69
Ac	38	21.91	5.14	.70	.68	.69
Ai	36	14.56	3.52	.70	.61	.74
Cf	42	20.43	4.46	.78	.77	.74
Is	28	13.02	3.19	.64	.69	.61
Fx	28	7.37	4.44	.76	.75	.72
Sn	32	12.98	3.53	.69	.71	.70
Vector scales						
v.1	34	9.40	4.35	.84	.77	.78
v.2	36	14.38	4.15	.70	.67	.73
v.3	58	15.99	5.78	.85	.83	.83
Special scales						
Mp	34	14.47	4.30	.67	.68	.84
Wo	40	16.19	4.50	.67	.72	.61
Ct	42	14.63	4.32	.73	.65	.78
Lp	70	25.04	6.26	.80	.77	.77
Ami	36	17.05	4.79	.59	.66	.76
Leo	42	17.84	3.53	.59	.58	.52
Tm	36	13.21	3.24	.76	.84	.80
B-Ms	54	26.02	6.82	.78	.83	.81
B-Fm	42	15.15	3.60	.70	.61	.63
Anx	22	4.78	1.85	.57	.55	.48
Nar	49	19.96	5.52	.72	.81	.73
D-SD	32	17.15	3.69	.53	.61	.57
D-AC	32	14.57	3.31	.45	.50	.47
FF	42	9.22	3.72	.58	.46	.58

Table 2

Average raw scores, standard deviations and internal consistency coefficients for the SWS scales (N=53)

Scales	Nr. items	Average raw scores	Standard deviation	Alpha coefficients		
		Total (N=53)	Total (N=53)	Male (N=33)	Female (N=20)	Total (N=53)
IMP	16	44.99	7.17	.71	.73	.72
ANG	16	41.53	7.66	.81	.79	.80
WI	16	50.23	7.93	.75	.80	.78
TU	16	47.74	7.41	.59	.61	.62
JD	16	40.62	7.29	.70	.79	.77
COM	16	44.62	6.97	.69	.67	.69
Type A scale	35	106.17	9.86	.77	.68	.73

The judgmental and incremental inclusion of personality variables into regression models had as a main objective not only the finding of regression models (factor combinations) which were able to maximize the multiple determination coefficient, i.e. to cover as large a part of the variance of the dependent variable, but also to find models that suffer from no errors (Sava, 2004). Special care was given to the *specificity error*, meaning that variables were included in the regression model not only based on statistical criteria, but also on the evidence suggested by the literature review, regarding the contribution of specific dimensions to explaining the dependent variable. Another aspect that received considerable attention was multicollinearity. This has been a special concern in our study, as the independent variables were measured based on an inventory with a holistic conception, with scales that sometimes strongly correlate with each other (sometimes as high as .80). Including such strong intercorrelated variables in the same regression model would invoke a type 2 error (Sava, 2004; Pedhazur, 1997). The solution we opted for was based on the study of the correlation tables between the variables of every specific model and the subsequent termination of those predictors with the lowest correlation with the unexplained variance of the criterion. This procedure is also done by the backward regression algorithm, but we have intervened in the empirical selection of variables where the literature review was able to fundament the preferential inclusion of a certain predictor in the regression model.

RESULTS AND DISCUSSION

Table 3 presents the main correlations existing between the CPI and SWS scales.

In the SWS, the Type A classifier scale was built using an empiric strategy with items strongly correlated with the Rosenman Structured Interview, with the specific objective of maximizing TABP detection in the same line as the Structured Interview. Indeed, in a study on 163 business managers, this scale succeeded in correctly detecting the type of 76% of participants (Jackson & Gray, 1988, 1993). This scale was very well detected by the CPI. Scales in the Self-management area of the CPI, namely Re, So, Sc, Gi, Cm, and Wb correlate negatively; however regression analysis shows that these scales have a low contribution at explaining the variance of

TABP. Multicollinearity has forced us to exclude them anyway, but another model of prediction emerged ($F(7,45) = 7.71$, $p < .001$), one that explains 54% of the classifier scale variance:

$$\text{TABP} = 168.13 - 1.97 \cdot \text{BFm} + 2.50 \cdot \text{Anx} - 1.14 \cdot \text{Nar} - 1.35 \cdot \text{v.1} - 1.07 \cdot \text{v.2} - 0.83 \cdot \text{v.3} + 3.14 \cdot \text{OccLev}^2.$$

The regression equation is self-explaining, stating that the TABP is much more easily found in persons with a masculine behavior (opposed to BFm), anxiety (Anx) and lower self-esteem (opposed to Nar), extraversion (v.1), a tendency towards opposing or challenging social norms (opposed to v.2) and with a weaker feeling of self-actualization (opposed to v.3). Interesting enough, but not at all unexpected, the higher we go in the organization's hierarchy, the more probable we will encounter TABP.

It is probably interesting to mention that among all the Social performance scales of the CPI, Cs, Capacity for Status, has registered the highest correlation with the Type A classifier scale of the SWS, even though this correlation is not significant. However, the three highest scorers on Cs in our sample are also the three highest scorers on the Type A classifier scale of the SWS, which is very consistent with the intent of the Cs scale, namely assessing upward social mobility and achievement orientation.

For the Impatience (IMP) dimension of the TABP, as assessed by the SWS, useful predictive indexes may be ascertained from the CPI. As a general principle we mention that CPI scales have a negative correlation with the behavioral tendency towards impatience, especially scales in the Self-Management section of the CPI, namely Re, So, Sc, Gi, and Wb and some of the supplementary scales, like BFm, DSd, but also the vector scales v.2 and v.3.

Through backward regression we have however retained a model based on Wo, Ami, BFm and DSd as being a good predictor of impatience as a TABP component, explaining 39% of its variance: $F(4, 48) = 7.72$, $p < .001$. The regression equation is:

$$\text{IMP} = 73.92 + 1.3 \cdot \text{Wo} - 1.04 \cdot \text{Ami} - .61 \cdot \text{BFm} - 1.14 \cdot \text{DSd}.$$

² OccLev is the occupational level of the employee, ranked on four steps.

Table 3
Correlations between CPI-260 and SWS scales (N=53)

	Type A/B classifier	IMP	ANG	WI	TU	JD	COM
Social performance	Do					-.255	.369**
	Cs						.360**
	Sy					-.245	.423**
	Sp						.477***
	Sa					-.247	.393**
	In						.346**
	Em						
Self-management	Re	-.293**	-.403**	-.367**			
	So	-.294*	-.311*	-.415**		-.416**	
	Sc	-.465***	-.390**	-.513***			-.322*
	Gi	-.373**	-.410**	-.526***	.246		-.245
	Cm					.261	
	Wb	-.268	-.342*	-.377**			-.323*
	To						
Motivations and thinking style	Ac		-.324*	-.395**	.256	-.248	
	Ai						
	Cf			-.283*			.404**
Personal characteristics	Is						
	Fx				.410**	.238	
	Sn	-.255				-.255	-.251
Work-related	Mp			-.234			.271
	Wo		-.231	-.348*			
	Ct				-.250		.349**
	Lp		.051	-.306*	.240	-.323*	.288**
	Ami	-.364**	-.439**	-.523***			
	Leo						.339*
Extra scales	Tm						.260
	BMs		-.239	-.248		-.253	.316*
	BFm	-.489**	-.343*	-.288*			-.270
	Anx	.227				.232	
	Nar	.308*	.265				.317*
	DSd	-.232	-.365**	-.400**		-.268	
	DAc						
	Hos						
FF				.279*	.232		
Vector scales	v.1	-.338*					-.488**
	v.2	-.275*	-.287*	-.292*	.308*	-.447**	
	v.3	-.227	-.297*	-.350*			

All correlations marked with* are significant at $p < .05$, those marked as** are significant at $p < .01$, those marked with*** are significant at $p < .001$ (bivariate). The unmarked correlations are significant at $p < .05$, univariate; empty spaces show insignificant correlations.

The numerical relationship captured above states that persons characterized by high work ethics (Wo), but also by intolerant and potentially polemic positions and interpersonal relations (reversed Ami), by masculine, impulsive, energetic and stubborn attitudes (reversed BFm) and with less interest of behaving in a socially desirable manner

(reversed DSd) are more prone to feel impatience to such a degree as to be associated with TABP. This explanation is consonant with the description given by Jackson & Gray (1988) and by Țânculescu & Iliescu (2006), for the IMP scale: nervous, impulsive, egocentric, unrealistic in their

demands, rigid, authoritarian, indeed with high expectations even from themselves.

It is interesting that Anger (ANG) scores show a high correlation with Impatience (IMP) scores on the SWS, and this also reflects upon the predicting CPI scales. The predictive model obtained by stepwise regression explains 38% of the Anger dimension: $F(4, 48) = 7.3, p < .001$, and states the following regression equation:

$$\text{ANG} = 64 - .45 \cdot \text{Gi} + 1.2 \cdot \text{Wo} - 1.18 \cdot \text{Ami} - .80 \cdot \text{DSd}.$$

In conclusion, persons picturing themselves as critical, stubborn, rebel (reversed Gi), with strong protestant work ethics (Wo), inclined towards intolerance and interpersonal disputes (reversed Ami) and less interested to behave in a socially desirable manner (reversed DSd) are more likely to exhibit Anger. These persons are described by Jackson & Gray (1988) as being irascible, temperamental, combative and hostile. Indeed, low Amicability scores suggest this pattern, as do low scores on the two social desirability scales (Gi and DSd). Also, it is worth mentioning that one of the highest possible correlations between ANG and CPI scales is the one with Self-control (Sc), suggesting that uncontrolled individuals get easier angry, but also persist more in this angry state and take more time to calm down. This also suggests a close relationship between self-control and impulsivity in the work environment and work orientation. It is also interesting that Anger, as a component of the TABP in the workplace is so closely related to Work Orientation and this suggests that, from this point of view, Anger is a behavior very specifically related to workplace situations.

Few of the positive correlations expected from the Work Involvement (Wo) scale of the SWS and the Work-related personality scales of the CPI were supported empirically. Only one scale, namely Leadership (Lp) correlated significantly, and only univariate. The regression analysis explaining work involvement as a TABP dimension is thus the weakest of those discussed here, covering barely 29% of the concept variance: $F(3, 49) = 6.51, p < .001$. But the variables included show a very interesting picture:

$$\text{WI} = 45.91 + .57 \cdot \text{FF} - 1.01 \cdot \text{Fx} + 2.07 \cdot \text{OccLev}.$$

In conclusion, this is a model where a demographic component, the occupational level, has the second large variance, after Flexibility (Fx). If we also take into consideration the work involvement correlates with age $r(51) = .331, p < .01$ and with the second vector of the CPI, v.2, $r(51) = .308, p < .01$, the image urges us to conclude that higher-ranking persons with a lower flexibility (adjectival descriptions from the ACL also stay in the area of seriousness, objective oriented, responsible) and with a more acute fighter spirit (in movement, achievement oriented) are more work-involved.

Time urgency (TU) has very low correlations with CPI scale scores, and these couldn't be used as valid predictors of this component of TABP. Significant univariate correlations were found with Sn, suggesting that, possibly, males tend to feel time urgency in a more acute manner.

CPI scale scores may also be used in order to identify persons who are prone to feel Job Dissatisfaction (JD), the prediction model included the v.2, So and Sa scales and explains 37% of the variance: $F(3, 49) = 5.96, p < .01$, offering the following equation:

$$\text{JD} = 61.23 - 0.32 \cdot \text{Sa} - 0.44 \cdot \text{So} - 0.57 \cdot \text{v.2}.$$

In conclusion, people inclined towards challenging social norms (reverse So and v.2) and with a general low self-acceptance are more inclined to feel job dissatisfaction.

Finally, Competitiveness (COM) as a TABP dimension offers the basis for an interesting comment. First of all, we have to note that high and significant positive correlations are obvious for 6 of the 7 scales in the Social Performance section of the CPI (Do, Cs, Sy, Sp, Sa, and In); subsequently we have a negative correlation with the v.1 vector. Positive correlations appear further in relation with some of the work-related scales, like CT, Lp and Leo, as well as with Cf, suggesting a positive attitude towards the own intellectual efficiency. The Self-control scale of the CPI correlates negatively with Competitiveness and the gender role pattern suggests a positive correlation with BMs and negative correlations with BFm and Sn, implying thus that males are more competition oriented.

The prediction model has a higher coverage, of 47% of the variance of Competitiveness, $F(5, 47) = 5.57, p < .001$; the regression equation states that:

$$\text{COM} = 50.52 - 1.3*v.1 - 1.1*Do + 0.58*Cf + 0.62*Sa + 0.82*Sy.$$

The model includes social scales like Do, Sy and Sa, but also the first vector (v.1), as well as a social efficiency/conceptual fluency score, suggesting that competitive individuals have a positive and believing attitude towards their own capability of intellectual functioning. It is, however, interesting to note that Do has a high participation in this prediction model *with a negative contribution*, which at a first glance would seem unusual. A careful analysis of the equation shows, however, that we will encounter a higher probability of a strongly competitive individual if he/she has a higher trust in his/her own conceptual fluency (Cf), and if he/she is more socially oriented (v.1), especially in participative relationships with others (Sy), if he/she is more self-acceptant (Sa). With all these constant, lower Do scores will predict a higher competitiveness, which could be explained through the fact that, as Gough (1987) and Megargee (1972) explicitly state, the Do scale of the CPI is a measure of *prosocial* dominance, describing persons who are wielding their influence by following socially acceptable purposes and not only to generate an increased self-esteem, as the competitiveness dimension of TABP states (Jackson & Gray, 1988). As shown by Gough & Bradley (1996) in his description of high vs. low scorers, high Do's are more inclined to support others and to accept subordinate positions if the objective of the team is thus reached. It is probably interesting to state that the Cs scale has the same contradictory behavior in relation with Competitiveness.

CONCLUSIONS

TABP has long since shaded its preferential conceptual treatment as a personality type, and is today explained as a behavioral pattern. But even though, as a measure for TABP, the SWS is considered a behavioral indicator, its scales have consistent relationships with personality scales of the CPI. The results of this study support the conclusion that TABP may in fact be inferred through personality measures, especially through one with such a high predictive validity, as the CPI.

Some of the behaviors associated with TABP are rather easily ascertained by the CPI, like Competitiveness, Impatience and Anger. On the other hand, for other behaviors, like Job

Dissatisfaction and Work Involvement, the CPI scales offer explanation for a rather low total variance. The most important thing is that the CPI is able to correctly identify persons belonging to Type A or Type B, when considering a regression equation containing scales like BFm, Anx, Nar and the three vector scales.

Some interesting lines for further study open up. The pattern of vector scales in the Type A/B distinction is to be considered, because it suggests that Type A individuals are to be found rather among those with low scores on all the three vector scales, which would mean that norm-challenging extraverts with low self-actualization (low Gammas) are much more prone to exhibit the TABP. Indeed, our data suggests that, out of our sample of 53 participants, 21 were identified as Type A individuals, and the 4 of them with the most extreme Type A scores are all Gammas: two have a level 2 on the third vector scale, one is level 3 and one is level 4.

Also, when taking into consideration the correlational analysis at item level we found that strong relationships between certain items of the CPI and dimensions of the TABP emerge. Considering all this there is a strong possibility of building in a TABP scale in the CPI, in the same tradition the Em scale and some of the secondary scales were built.

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