An idiographic approach of agreeableness: two study-cases

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Abstract

This study aims to measure the impact of situational attributes on the coherence of agreeable behavior. Also, the study focuses on prediction of agreeable behavior’s evolution from a dynamic perspective. The idiographic approach was applied to two cases taking into account the interaction between person and situation (P×S). Using structural equation modeling a different impact of situational attributes in the perception of the two cases was discovered. The cross-validation procedure we used allowed to predict the dynamic evolution of agreeable behavior in new contexts.

Keywords: Situational attributes; Coherence; Dynamic prediction; Agreeable behavior.

1. Introduction

Superior solutions predicting the evolution of behavior are still being searched. These searches were split in two distinct categories. Some researchers have proposed nomothetic methods while others have argued the necessity of implementing idiographic methods. The first category of researchers credits the idea that the factors or traits of personality are necessary and sufficient elements for predicting a particular behavioral criterion (Epstein & O'Brien 1985; Johnson, 1997; McCrae, 2005; Ten Berge & De Raad, 1999), as long as the behavior is mainly a function of the person. In a formal manner, this idea was expressed as B = f (P). A major limit of predictions based on traits of personality is that situational triggers that could contribute to the activation of behavior are not explicitly included in the prediction equation (Shoda, 1999). The authors who proposed idiographic methods have claimed that understanding personality as a dynamic system requires an interactionist approach, as behavior is a product of the interaction between personality factors and situational triggers. The formalization of this idea is B = f (P, S). A logical error to be found in the prediction of individual behavior based on personality factors (the
nomothetic methodology) would be its foundation on data collected at the level of groups. Thus, the predicted score for an individual is dependent on macro regularities (e.g., group mean and standard deviation). But, sometimes these regularities may not properly characterize any single individual (Lamiell, 1981).

The Cognitive-Affective Personality System Theory (CAPS) was proposed by Mischel and Shoda (1995). It was an essential upgrade for the conceptual grounding of the idiographic approaches. CAPS allowed the integration of two important issues that could not be treated properly by nomothetic approaches. The first aspect refers to the conceptualization of behavior in terms of dispositional constructs. The latter were defined as probabilistic rules of association between sets of situational and behavioral categories. Situations are operationalized here explicitly, not implicitly, through subjective attributes which are found in the person's representation, even if they correspond or not with those of the researcher (Zayas & Shoda, 2007). On the other hand, although the behavioral response varies cross-situationally, the form of variation at intra-individual level is often stable, which corresponds to the concept of coherence (Mischel & Shoda, 1995). The conceptualization in terms of coherence gives the possibility to predict behavior as dynamic evolution over different contexts and occasions. A dynamic prediction is facilitated because CAPS conceptualize personality in terms of an interconnected network of cognitive-affective constructs that mediates input-output relationship, resulting in coherent patterns of behavior (Shoda, LeeTiernan & Mischel, 2002). The supporting arguments and the operationalization proposed by the idiographic approaches, such as CAPS, led to superior results in predicting the evolution of behavior (Shoda & Mischel, 2000; Shoda, Mischel & Tiernan, 2002; Zayas & Shoda, 2007). However, the body of research aiming to enhance the results of behavior dynamic modeling is still modest. Using an idiographic approach, the present study aims to confirm the Cognitive-Affective Personality System Theory.

2. Objectives

The objectives of the present research were: (a) to measure the specific impact that situational attributes have on agreeable behavior of each person (b) to explore the behavioral coherence and the possibility to predict the dynamic evolution of cross-situational behavior.

3. Method

The study presents an idiographic analysis of behavioral coherence for two cases. Both cases were females, aged 20 and 22. The participants were undergraduate students at the Faculty of Psychology of the University of Bucharest. In order to determine the behavioral consistency, the idiographic methodology was carried out according to the model proposed by Shoda, LeeTiernan, and Mischel (2002). The behavioral construct for which coherence was determined was agreeableness. The two undergraduate students have agreed to participate in a laboratory study. Data were collected following the steps that are presented bellow. Step 1. The construct of agreeableness was operationalized through a fixed thematic scenario, but which varies as way of interpretation. The dimensions operationalized in the scenario were altruism and kindness. The theme of the scenario assumed an aid request consisting of a transport ticket or equivalent money to buy the ticket. The scenario was played by persons who were in real contexts (e.g., in the street, at the bus stop) and who gave their informed consent to be filmed. Then, the films were used as stimuli in the laboratory stage of research. Each person who had been filmed was asked to behave as naturally as possible when playing in the scenario, as if they would have been forced to beg the help of another person to get the ticket. Each interpretation was video recorded. There was retained a final number of 80 short films brought to a standardized presentation form after that. The short
films were randomly administered with a computer software that also allowed the recording of every answer given by the respondents. **Step 2.** Two repeated measurements were conducted. The two participants who are exemplified in the present study were invited to the laboratory in order to answer the 80-stimulus situations. They were asked to watch each filmed situation and to indicate on a scale ranging from 1 (minimum agreement) to 10 (maximum agreement) the extent to which they will respond positively to the request. A single choice could be made on the response scale by a simple click of the mouse. The participants were asked to behave naturally, as if they received the request in the natural environment (e.g., a bus stop) and then to respond the way they felt. Also, they were asked to treat each stimulus (person-solicitant) independently of other stimuli they had already watched. After an interval of two weeks, the participants have responded again to the series of stimuli. In this way, it was possible to measure the agreeableness of each respondent but also the stability of the responses. **Step 3.** Identifying the triggers that had the value of a behavioral activator involved reviewing each stimulus situation in a separate session. For each film separately, the participants were asked to identify and list all psychological attributes (triggers) that in their opinion have activated their agreeable vs. non-agreeable response. **Step 4.** From a larger sample of 69 subjects, lists of the attributes were obtained. The lists were collated, synonymies being equaled. Finally, the attributes with the highest frequency of occurrence were retained (n = 15).

4. Results

For each of the two respondents, the stability in time of the pattern of response to stimulus situations was checked. The correlation between the distribution of agreeable responses at the two measurement times was \( r = .68, \ p < .001 \) for the first respondent and \( r = .71, \ p < .001 \) for the second. The magnitude of correlation coefficients indicates a moderate to strong test-retest associations, confirming the existence of a stable pattern of response in time.

The idiographic analysis assumes that a person’s behavior is determined not so much by the objective situation, but by the idiosyncratic way of encoding it. Therefore, using the structural equation modeling we aimed to identify which out of the 15 situational attributes (triggers) that were initially retained in the analysis have actually activated the agreeable answer (or the non-agreeable one) given by each respondent. The initial structural model included 16 observed variables: the 15 situational attributes were independent variables (predictors), while the agreeable answer was the dependent variable. The structural models were estimated using Maximum likelihood algorithm. The fitting of the model was assessed using Chi square test, NFI and RMSEA indexes. For the last two indexes we set the cutoff criterion at .95 and respectively .05, accordingly to Schreiber et al. (2006). The standardized path coefficients for the two cases are illustrated in Figure 1. For the first respondent one can see that from all the 15 triggers initially retained, only four have the power of behavioral activation. For the second respondent five triggers were confirmed. A single trigger ("credibility") was common activator for both respondents, the rest being uncommon. Thus, the agreeable behavior of the two respondents was controlled by rather uncommon than common situational triggers. Some triggers have had a positive value, predicting agreeable response activation. Such an attribute is for example "polite" for the first respondent (\( \beta = .30, \ p < .01 \)). There were triggers that had a negative activation value, predicting the non-agreeable behavior. An example is the attribute "appearance" for the second respondent (\( \beta = -.26, \ p < .05 \)). As is shown by path models, some triggers do not activate independently, but covary strongly (e.g. the positive covariation between the attribute "credible"/"reliable" and the attribute "sincere"/"serious" - \( \beta = .71, \ p < .001 \) or the negative covariation between the attribute "helpless" and the attribute "sympathetic"/"nice" - \( \beta = -.26, \ p < .05 \)). Therefore one may suspect a mutual potenciation of predictors in relation to the activation of agreeable responses. For each respondent, active triggers represented a valid predictive model. The two models
proved a good fit with the data, as values for $\chi^2$ was insignificant, NFI was close to 1.00, and RMSEA was lower than .06. Thus, the attributes that were identified in the present study may be invoked as explanatory factors of the agreeable behavior of each person.

Fig. 1. Structural equation modelling of situational attributes for (a) Person #1 and (b) Person #2

To verify whether these statistically confirmed triggers can predict accurately the systematic variation of agreeableness of the two respondents in other new situations, we have used the following scheme: the stimulus situations (total of 80), and the answers to these given by the respondents, were divided into an analysis sample ($n = 40$) and another sample for validation ($n = 40$). The weights of the attributes were recalculated, only data from sample analysis being used. On this basis, the predicted/expected values were calculated for each of the two people at the level of the validation sample using the following formula: predicted scores = (frequency of modeling sample attributes $\times$ frequency of validation sample attributes) + intercept.

Fig. 2. Dynamic prediction of the agreeableness behavior for (a) Person #1 and (b) Person #2

Since the scores of agreeableness for the validation sample were not taken into the calculation of weights, one may consider that the situations covered in this sample behave as virtual new contexts. In fact, the respondents’ answer to these situations has already been measured, thus allowing us to correlate the predicted response to the real one, as a means of validation. Figure 2 depicts different behavioral patterns obtained for the two respondents.

The thin line represents the real level of agreeableness (mean of test-retest values) for each respondent across the eighty situations. The bold line is the predicted values for each respondent. They were based on the frequencies of the situational attributes. These attributes were validated by structural equation modeling, being recalculated in the analysis sample. As it can be seen, behavior modeling based on
including weights of situational attributes in equation is able to predict very accurately the variation of the behavior. The correlations between predicted scores and real ones were significant \( r = .64, p < .001 \) – for the first person, and \( r = .65, p < .001 \) – for the second one. For both correlations, the effect size was large (see Cohen, 1992).

5. Discussions and conclusions

The present study has verified the objectives it has started from. The findings of structural equation modeling results have confirmed the fact that under one and the same social situation, two different persons tends to activate different representations. Although with activation different weights, the representations of the two respondents were articulated on different situational attributes and, to a little extent, on common attributes. The findings of the present study showed that the answer of each respondent was sensitive to the configuration of situational attributes that were activated. The structural equations graphically presented, support the idea that, although at the level of a given population specific situational attributes (triggers) are frequently listed, idioGraphically only those triggers that have statistical power in relation to the behavioral activation of a particular individual should be retained. The weights that were calculated for the situational attributes proved to be indispensable elements in shaping the behavioral pattern of the two persons which participated in the present study. They allowed to work out the cross-situational behavioral coherence of agreeable responses of the two persons, and moreover, the dynamic prediction of the pattern of response to new situations. Thus, regarded from a point of view of situational attributes, the two cases that were included in the present study showed different patterns of the agreeable behavior, but coherent and therefore predictable. The findings were convergent with those reported in other studies that were carried out according to CAPS model (Shoda & Leetiernan, 2002).

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