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The applicant non-verbal behavior facing recruitment interviews

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Introduction

An interview is defined as a quality of meetings, face to face, in which, at the same time we pay attention both to the content of verbal and non verbal behavior. In the case of the selection interview (also known as job interview) we are in the presence of the most used instrument assess in the recruitment context and a very popular topic for researchers from nearly 100 years ago (Macan, 2009). In the last half-dozen years have emerged more than a hundred articles in newspapers and books on the subject (Posthuma, Morgeson & Campion, 2002) reporting research in three areas: structuring the script and validity (1), which indicators are measured (2) and which factors on the part of interviewee and interviewer can influence the outcome (3) (Macan, 2009).

In the factors that can influence the outcome, the nonverbal behavior of interviewee is an important contribution to judgment decision of interviewer's (favorable or not favorable) (Gifford, Ng, & Wilkinson, 1985).Nonverbal behavior includes a number of aspects of body language including facial expression, eye contact, posture, gesture and inter-personal distance (Mehrabian, 1972). This type of communication is in effect a series of cues that are encoded by the sender, either consciously or unconsciously and subsequently decoded by the receiver (Gabbott & Hogg, 2000). Each component of nonverbal behavior affects the interpersonal relationship in a different way.

Furthermore, during a job interview, as in most of the social interaction scenarios, people in a conscious way tend to control more the verbal behavior stream than the nonverbal one (DePaulo, 1992) and since this last is more difficult to control and consequently to fake (Weisbuch, Ambady, Clarke, Achor, & Weele, 2010) the interviewer as an observer and decoder has more cues and with much more consistency to form and manage an impression about the interviewee.

Therefore, there are a close relationship between the non-verbal behavior of the candidates and the impression management (IM) formed by interviewers. This concept aroused from the literature produced by organizational psychology and was adopted by selection interview research as being "an attempt conscious or unconscious to influence the image during the process of interaction" (Levashina & Campion, 2007, p. 1639).

IM can be grouped into two categories: self-promotion and other enhancement. Both classifications - self-focused-type and other-focused-type tactics - have been adopted by many organizational researchers studying IM in job interviews (Erdogan, 2011). Self-promotion includes description on a positive way of past experience and accomplishments in order to create a good perception on the interviewer and, other enhancement, is related to flattering, opinion conformity, feigned helplessness and favor doing (Barrick, Shaffer, & DeGrassi, 2009). Candidates purposely train their control over the verbal behavior, meaning their verbal style of delivery and fluency, and also, the nonverbal actions such as smiling, making eye contact, nodding, leaning forward, and making hand gestures (Barrick et al., 2009).

These variables (impression management, verbal and non verbal behavior), along with the physical attractiveness, are correlated with the interview rating (Goldberg & Cohen, 2004).

Accordingly to Huffcutt (2011, p. 71) four studies were identified with relevant data: Burnett and Motowidlo (1998) found correlations between total structured interview ratings and independent assessments of nonverbal behaviors (gaze, smile, hand movement, and body orientation); Gifford and Wilkinson (1985) found correlations between interviewer ratings and independent ratings of nonverbal behaviors (dress, reclining angle, facial regard, smiling, and gestures); Lievens and Peeters (2008) found a correlation with the behavior description portion of their interview and the situational portion; finally, Tsai et al. (2005) found that self-reported use of friendly nonverbal cues like smiling and nodding are correlated with interviewer evaluations. All of these studies used verbal statements to refer non verbal behaviors considered by participants more relevant to the evaluations. However, It may be useful to traduce these verbal statements into non verbal codes in order to produce a categorization able to function as an orientation for selection interviewers.

In all of the coding systems one of the most used is FACS (facial action coding system), developed initially in 1978 by Ekman & Friesen and revised in 2002 (Ekman, Friesen & Hager). It Includes 44 action units (AUs) which are the fundamental actions of individual muscles or groups of muscles and 14 action descriptors (ADs) or unitary movements that may involve the actions of several muscle groups. For most accurate annotation, FACS suggests agreement from at least two independent certified FACS encoders (Ekman & Friesen, 1978). Unlike systems that use emotion labels to describe expression, FACS itself is descriptive and includes no emotion-specified descriptors and so, explicitly, distinguishes between facial actions and inferences about what they mean. Also, because of its descriptive power, FACS is regarded by many as the standard measure for facial behavior and is used widely in diverse fields (Cohn & Ekman, 2005). Since the face was found to provide more information about the nature of the emotion than the intensity of the emotional state, it's became important to observe body acts and still positions to understand that last point. Five categories of non verbal behavior were proposed by Ekman & Friesen (1969) as a coding system to decipher that emotional intensity: Emblems (1) are non verbal acts which have a verbal direct translation known by all members of a group, class or culture. Illustrators (2) are movements directly linked to the speech and serve to illustrate what is being said verbally. Affect Displays (3) are movements involving face or body or body parts (arms, hands) associated with the demonstration of primary affects. Regulators (4) are acts which aim to maintain and regulate the natural feedback regarding both speaking and listening postures. Adaptors (5) are those movements that were first learned to satisfy different development needs and after that became altered to respond to a certain demanding situation. We can distinguish between self, alter and object adaptors (Ekman & Friesen, 1969).

Another factor that can influence the outcome of interview is the candidate motivation. There is very few data on the relationship between interview ratings and general work motivation and specifically between the motivation and the nonverbal behavior performed by the candidate in the interview. Accordingly to suggestions of Huffcutt (2011) about the importance of assess the influence on interview ratings, in our study we plan to search for correlations between job interview ratings, nonverbal behavior and the three motivators of McClelland's Motivation Theory: achievement, affiliation, power (Rego, 2000).

The employment interview is a context where a variety of constructs are measured, including personality traits. Interviewers tend to make assessments of interviewee personality traits which influence their evaluations of applicant capacities. Big Five Personality attributions can be a good mediator between the nonverbal cues and the interview performance rating (DeGroot & Gooty, 2009).

Our objective, taking in account all the above information, is to analyze the relation between the non verbal behaviors of the candidate in a real selection interview context and the decision-making of the interviewer. For that, we intend to identify specific nonverbal behaviors of candidates in real selection procedures that contribute to judgment decision of interviewer's (favorable or not favorable) and, on the other hand, we also intend to analyze if the evaluation

of some specific facial expressions and gestures are related with the self-evaluation of another characteristics (Personality and Motivation).

Method

Participants

The participants in our study are 46 candidates that completed the selection process (N=46): 25 men (54,3%) and 21 women (45,7%), ages between 22 to 39 years (mean=27,9).

Procedure

In partnership with a recruitment consultant company we developed two recruitment processes for 'technical commercial engineer' and 'accountant' through advertisements placed in specialized web sites. Accordingly to the job profiles the received CV's were evaluated considering the academic and technical features of each process. From the 51 applicants summoned to selection interviews, 46 completed the process and signed an informed consent. In the end, one of them was admitted for each open job place. On the basis of both job descriptions was built a script for the structured interview that allowed the standardization and control of the time limit. The 46 interviews were conducted by female and male interviewers to achieve a balance between the genders in terms of interaction candidate-interviewer: about 50% male and 50% female. The interviews were of the individual type: with no panel of interviewers or engaging groups of candidates.

All the 46 interviews were video recorded with a hidden camera. Only after each interview has been completed, the presence of the camera was revealed and the candidates informed about the research and asked their permission for the use of the recordings. Also after the interview, a Personality Scale and a Motivation Scale were applied to the candidates.

To the interviewers, on their turn, were asked to fill a list of non verbal behaviors which they took into consideration to give their opinions when making the individual selection report which included the result favorable or unfavorable. That list was blank and had only a Likert scale between (1) *nothing decisive* to (5) *totally decisive*. The intention was to have no influence on the behaviors choice so that the impression management could be the most genuine and independent as possible.

In the next step interviewers were invited to identify in the video the non-verbal behaviors of the candidates that they pointed out in each interview list and took in account in their judgment decision.

Snapshots of all those non verbal behaviors (N=230) were taken using the AVS Video Editor v6.3 software and sent to two independent certified coders and subjected to an inter-coder agreement procedure. The non verbal behaviors related to facial expressions and gestures were coded using FACS (Facial Action Coding System, Ekman, Friesen & Hager, 2002) and categorization codes of gestures defined by Ekman and Friesen (1969). Illustrators were analyzed using specific denominations for the variations of amplitude and placement: *Ilust1* (both hands on the table); *Ilust2* (only one hand on the table); *Ilust3* (only one arm raised); *Ilust4* (both arms raised) and *Ilust5* (joined hands and illustrating speech with fingers).

Some additional codes were also produced to capture differences in general posture: relaxed posture (RelaxPost), rigide posture (RigPost) and tilted posture (TiltPost). Related to hand positions additional codes were defined: arms crossed and hands on elbows (HndElb), hands on the table and elbows outside the table (HndJoint1), joined hands on the table and elbows also on the table (HndJoint2), hands and elbows placed outside the table (HndJoint3); one hand and elbow placed outside the table (HndJoint4) and hands apart with elbows placed on the table (HndJoint5). Adaptors were also transformed into numerical categorizations: hands touching clothing (Adapt1), hands touching personal objects (rings, earings,…) (Adapt2), hands touching upper parts of the body (face, hair,…) (Adapt3), hands touching lower parts of the body (legs, trunk,…) (Adapt4), hands touching non-personal objects (pen, paper sheets,…) (Adapt5).

Instruments

A Personality Scale (NEO-PI--R Personality Inventory, Costa & McCrae, 1992) and a Motivation Scale (McClelland Motivational Scale, Rego, 2000) were applied to the candidates. The NEO-PI-R comprises 240 statements, to which the participants respond on a Likert-scale by indicating the degree of their agreement (between strongly agree to strongly disagree) to whether a particular statement is relevant to themselves. The personality test gives out scores for five factors: neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A) and conscientiousness (C) and each one of these gives other six sub-factors. Sub-factors of neuroticism are: anxiety (N1), hostility (N2), depression (N3), self-consciousness (N4), impulsiveness (N5) and vulnerability to stress (N6). The sub-factors of extraversion are: warmth (E1), gregariousness (E2), assertiveness (E3), activity (E4), excitement seeking (E5), positive emotion (E6). The sub-factors of openness to experience are: fantasy (O1), aesthetics (O2), feelings (O3), actions (O4), ideas (O5), values (O6). The sub-factors for agreeableness are: trust (A1), straightforwardness (A2), altruism (A3), compliance (A4), modesty (A5), tender mindedness (A6). The sub-factors for conscientiousness are: competence (C1), order (C2), dutifulness (C3), achievement striving (C4), self-discipline (C5), deliberation (C6) (McCrae & Costa, 1992).

The Motivational Scale comprises 18 statements, to which the participants respond on a Likert-scale by indicating the degree of their agreement (between *never* to *always*) to whether a particular statement is relevant to themselves. It produces three dimensions – (1) need for success or achievement (success). This person is achievement motivated with attainment of realistic but challenging goals, advancement in the job, need for feedback, progress and for a sense of accomplishment; (2) need for affiliation (affiliation). These persons have a need for friendly relationships and are motivated towards interaction with other people. Furthermore, the affiliation driver produces motivation and need to be liked and held in popular regard; (3) need for power (power). These persons desire to be influential, effective and to make an impact. Also have a strong need to lead and for their ideas to prevail, revealing motivation and need towards increasing personal status and prestige. Most people possess and exhibit a combination of these characteristics and these needs are found to varying degrees in all workers and managers (Rego, 2000).

Results

In a total of 46 interview judgments, 19 were *favorable (FV)* and 27 were *unfavorable* (UnFV). Frequencies of these evaluations are listed below following the non verbal behavior and percentages were calculated taking in account the total number of each category, favorable (N=19) and unfavorable (N=27). We also present the results of correlations of the Spearman´s rho type.

Frequencies and percentages of Favorable and Unfavorable Non Verbal Behaviors

Duchenne Smile – AU6+12 (3 FV, 6,5%, decisive; 14 FV, 30,4% very decisive);
Eye Contact - (4 FV, 8,7%, decisive; 12 FV, 26,1% very decisive);
Ilust1 - (2 FV, 4,3%, decisive; 13 FV, 28,3% very decisive);
RelaxPost - (4 FV, 8,7%, decisive; 2 FV, 4,3% very decisive);
Brow Lowerer – AU4 -(4 UnFV, 8,7%, decisive; 5 UnFV, 10,9% very decisive);
Eyes Down – AU64 -(3 UnFV, 6,5%, decisive; 12 UnFV, 26,1% very decisive);
No Eye Contact - (2 UnFV, 4,3%, decisive; 3 UnFV, 6,5% very decisive);
HndJoint2 - (3 UnFV, 6,5%, decisive; 9 UnFV, 19,6% very decisive);
Adapt3 - (2 UnFV, 4,3%, decisive; 4 UnFV, 8,7% very decisive);
TiltPost - (2 UnFV, 4,3%, decisive; 6 UnFV, 13% very decisive).

Significative Statistical Correlations Between Non Verbal Behaviors and The Decision Level of Favorable Judgements
Duchenne Smile ($p<0,01$); Eye Contact ($p<0,01$); Ilust1 ($p<0,01$); RelaxPost ($p<0,01$).

Significative Statistical Correlations Between Non Verbal Behaviors and The Decision Level of Unfavorable Judgements
Brow lowerer ($p<0,01$); Eyes Down ($p<0,01$); No Eye Contact ($p<0,05$); HndJoint2 ($p<0,05$); Adapt3 ($p<0,05$); TiltPost ($p<0,05$).

Significative Statistical Correlations Between Non Verbal Behaviors and Personality Factors and Sub-Factors
Between HndJoint3 and (N1) ($p<0,05$); Between HndJoint4 and (N1) ($p<0,05$); Between AU54 (head down) and (N4) ($p<0,05$); Between AU17 (chin raiser) and (N5) ($p<0,05$).
Between AU56 (head tilt right) and (E1) ($p<0,05$); Between AU2 (outer brow raiser) and (E2) ($p<0,05$).
Between AU54 (head down) and (O3) ($p<0,05$); Between RelaxPost and (O3) ($p<0,05$); Between AU2 (out brow raiser) and (O4) ($p<0,05$); Between AU56 (head tilt right) and (O6) ($p<0,05$); Between AU4 (brow lowerer) and (O6) ($p<0,05$).
Between Duchenne Smile and (A4) ($p<0,05$); Between Ilus1 and (A4) ($p<0,01$); Between RelaxPost and (A4) ($p<0,05$); Between AU15 (lip corner depresser) and (A5) ($p<0,05$).
Between AU56 (head tilt right) and (C2) ($p<0,05$); Between RigPost and (C5) ($p<0,05$).

Significative Statistical Correlations Between Non Verbal Behaviors and Motivation
Between Eye Contact and Affiliation ($p<0,05$); Between HndJoint4 and Affiliation ($p<0,05$).
Between AU55 (head tilt left) and Power ($p<0,05$); Between HndJoint3 and Power ($p<0,05$).

Discussion
Non Verbal Behaviors and Interview Judgment
The Duchene smile is the non verbal behavior most significantly related to the favorable judgment. This type of smile is known as the genuine smile and is linked to self-confidence creating empathy on the other person (Woodzicka, 2008). Findings also suggest that false smiling during an interview results in less favorable evaluations (Woodzicka, 2008).
Eye Contact behavior is very significantly related to favorable evaluation (and *No Eye Contact* significantly related to unfavorable) on our study. It affects interviewer ratings in a very decisive way since it is considered a powerful facial expression to signal a social intent (Hess & Bourgeois, 2010). The results of eyes looking down are congruent with this social interaction.
It seems that some less controlled gestures, like HndJoint*2* and *Adapt3*, are linked to unfavorable interviewer decisions.
Ilust1 is an illustrator in which the candidate uses both hands to draw on the table examples that he or she is explaining orally to help the interviewer to follow a specific idea. These kind of non verbal actions tend to create an idea of more enthusiasm and to facilitate the social interaction (Jelf, 2010).
Brow lowerer (AU4) is an action unit that tends to impress negatively the interviewer. According to some authors, it transmits concern, and obstacles perception (Smith & Scott, 1997).

Non Verbal Behaviors and Personality
Less structured hand movements like HndJoint3 and HndJoint4, are related to anxiety management (N1 subfactor).

The movement of the head down (AU54) in FACS and RelaxPost which is a body posture relaxed are behaviors that display interest and give feedback to the other person during the interaction and are contemplated in the O3 NEO PI R subfactor 'feelings' (Costa & McCrae, 1992).
A set of non verbal behaviors (Duchenne Smile, Ilus1 and RelaxPost) related to positive meanings are connected compliance which is a dimension of agreeableness.

Non Verbal Behaviors and Motivation
Eye Contact significantly correlated with affiliation, is a characteristic of an applicant who wants to belong to the group, to be liked, and will often go along with whatever the rest of the group wants to do. It favors collaboration over competition (Ferreira, Diogo, Ferreira, & Valente, 2006).

Conclusion
Our results indicate that some facial expressions and gestures considered more favorable in the evaluation made by interviewers are Duchenne smile (AU6+12), eye contact and speech illustrators. On the other side, eyes down (AU64), hand positions, adaptors, the absence of eye contact and posture tilted are considered more unfavorable.

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