

Personnel Selection

The goal of this document is to describe recent scientific research on personnel selection. Often, when experts talk about personnel selection, main focus is on one activity: per job interview. However, the process of personnel selection is broader: it is a process regarding all phases of the worker life: job analysis, task analysis, recruitment, selection of selection tools, implementation of personnel selection process, analysis of work socialization processes, coaching, mentoring and monitoring are just some examples of the entire process.

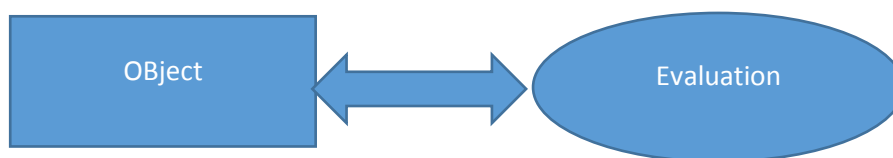
Low economic, time and expertise resources, often lead to do selection approximately, without a specific scientific methods. However, costs sustained for doing a correct evaluation are much lower than costs related to selection errors. It has been demonstrated mathematically that correct personnel selection lead to a significant reduction of counterproductive work behavior and lead to a reduction of costs related to these behaviors (thefts, turnover, absenteeism, low performance etc, Fine, 2012). In this document we want to communicate main problems related to bad evaluation in order to reduce selection errors.

Human nature is evaluative

Social Psychology has demonstrated many times that humans does evaluation constantly. It is a basic function of psychology that happens constantly. Man has always had to do evaluations rapidly and with the maximum level of accuracy possible. This process has been a way for surviving and increasing probability of success. An unknown persone is for everybody a challenge of evaluation, in fact he can be positive or negative.

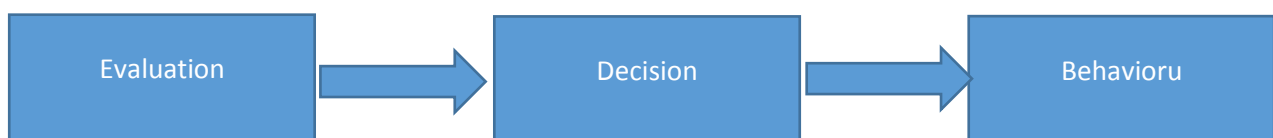
Social cognition – a theory of social psychology – says more with the words of Fazio (1986) who says that an object and its evaluation cannot be separated. If there is an object (physical or a social actor), there is an evaluation. The psychological structure that connect a social object to its evaluation is called *attitude*.

Image 1. Attitude representation



We all live the experience of a constant process of self and other evaluation. Basically, we do evaluation in every instant, also unconsciously. We all do evaluation and people selection. A minimal cue of verbal and non verbal behavior lead as to go toward or avoid the person in front of us. Automatic processes and thoughts leads us to say “yes” or “no” and this continuous decisional process affect our life significantly, because it define our relational and social context.

Have you ever experienced instant connection with a person without knowing exactly why? Our mind instantly and constantly others and this guide our decisions and behaviors influencing our life day by day.



Scientific People evaluation

Two systems of evaluation exists

- The first, rapid and instinctive: it is based on mind shortcuts that allow us to reach a satisfactory problem resolution briefly
- The second, slow and accurate that consider all available information and consent to find the best possible solution in a longer period of time

Both decisional models has a fundamental role in our life. First system is determinant: if we select an attentive method for all our decision (also little ones) we should spent a significant amount of time on decisional processes, lowering in this way the quantity of our action and doing a bad time management. Obviously, the error level of the first system is bigger and this is the reason why we use the slow and accurate method with our decision is very important.

In the process of **people evaluation during the personnel selection** is important to use the slow and accurate process. In fact, the costs of bad evaluation is too high for not considering this method. And this is true also for the selection of trainee and students, because however, also if we are not taking decision about economic resources, we are doing decision on people time and resources.

Fast decisional processes

- Evaluations based on stereotypes
- Evaluations based on prejudice
- Evaluations based on physical attractiveness
- Simplifications and mind shortcuts

Slow decisional processes

- Evaluations based on structured interviews
- Evaluations based on psychometric tests
- Evaluations based on behavioral analysis

Personnel selection methods

The processes of personnel selection change with the evolution of society: psychometric tests, interviews, practical trials, assessment center are just a little portion of all selection methods. Today, the development of technology has suggested new and more rapid way of selection like the skype interview, the video interview, the social media profile analysis,

Sometimes, these methods are applied before the actual selection and this may lead to an increased level of statistic error. At the same time, it is difficult to make evaluation on continuously changing processes (for example, Facebook rules, algorithms and communication changes very rapidly). A second factor, often underestimated is the analysis

of cultural differences that plays a role in selection processes and can lead to an increased level of error.

The most common methods used today for the personnel selection are:

- Structured interview
- Situational interview
- Psychometric tests
- Projective tests
- Group interview
- Assessment center
- Group interview
- In-basket

Measurement?

When we talk about measurement in psychological sciences is important to give a specific definition. We find in the vocabulary that measurement is – the operation of measurement based on comparing a physical quantity with a measure unit, the goal is to determine the value (or the measure of a physical quantity) [...] Specifically, the direct measurement (or fundamental, or relative), allow to determine directly the measure of a quantity (without the use of measurement of other quantities), comparing the information with a sample; the indirect measurement (or derivate), depends on a specific relational function, it depends on other direct measurement. Sometimes, measurement is also used improperly in other cases like the classification or serial ordering (basing on arbitrary parameters) of qualitative characteristics: for example, the measurement of the hardness of a solid substance in the Mohs Scale, or the measurement of the intelligence quotient with psychometric tests. If we consider the Italian definition, there are many incongruences between the definition of measurement and the psychometric definition of measurement.

1. According to the definition, the magnitude is to be compared with a stable unit of measurement which in psychology is only taken into account in rare cases
2. Psychology is often referred to as "classification, serial sorting procedures" (www.treccani.it)

According to the definition, therefore, the term measurement is inconsistent with the activity that is actually done in psychology for the evaluation of psychological phenomena. The use of the term measurement in psychology is very confusing, and is also used for very different processes ranging from counting to classification to assigning a number to behavior samples without however having the above mentioned comparison with a unit of measure.

Caprara and Barbaranelli write (2000, p.131): "Open answer questions provide qualitative data at the lower measurement level of the nominal scale [...]" In this case, for example, the term measurement is used to refer to a count. With the nominal scales, you can only count units belonging to the different categories, so you cannot measure them.

But above all, sometime the term measure is used when talking about qualitative data, which, paradoxically, are measured. In a Zammuner's textbook, the use of the term measurement is not only improper but also redundant. Zammuner (1998) writes: "For measurements we mean here the tools used to gather the desired information about one or

more variables or arguments based on the purposes of the research" (1998 p.62), speaking of "unique and repeated measures over time" (1998 pp. 56-57) uses the term "measures" to refer to the data and means of data collection. Finally, although measures mean the tools, data, and detection procedures, and although it sees the questionnaires as "measuring instruments".

The term "improper nominal scale" is considered to be, as it does not presume that there is a range between categories, it can not be thought of as a scale (which, at least, must assume a "higher step" and a "lower step" Nominal "the ways that the variable can assume are only in a relationship of equality or diversity" (Rocchi 2007). The term categorical scale (Zammuner 1998) is also considered improper, the term categorical, in Italian means "Which excludes doubt ", and is not a qualifying adjective that links to categories. It is appropriate, however, to talk about property and categorical variables (Marradi 2007)

Concluding with Marradi (2007): "Many researchers (typically behavioral inspirers, and especially Americans) freely use the terms 'measure / measure / measure' for each state registration procedure (sorting, counting, scaling, and even for classification).

This true terminological abuse has no other reason than the anxiety of scientific legitimation through the imitation of physical sciences; By not being able to measure in the proper sense, it is remedied by using all the words that share the 'measure' root. At this point, two alternatives are imposed on this psychometric question: - the meaning of measurement in psychology is something different, which is distinct from the Italian and scientific meaning of the term. - the measurement term is badly adapted to the psychological data collection activities and should be modified. Consequently, the terms psychometrics and sociometry become questionable. It is inappropriate to use these terms, as measure, is a foundation of the word psychometrics.

Validation criteria for personnel selection

Whatever the selection process is, it is validated through a series of psychometric procedures. Validation is a long process but necessary to improve the quality of your choice.

Validation criteria for a measurement method (Boncori, 2006) are

- Content Validity
- Face Validity
- Criterion Validity
- Convergent validity
- Diverging validity
- Concurrent validity
- Predictive validity
- Post-validity
- Validity of construct
- Reliability as replicability
- Reliability as homogeneity
- Reliability as objectivity

Content validity is defined by Haynes and colleagues (1995, p. 238) as "the degree to which the elements of an evaluation tool are relevant and representative of the construct in question for a specific evaluation purpose"

It may seem commonplace, but it is actually complex to evaluate the validity of content. Obviously, whoever builds the test will put within it only the stimuli inherent to the constructs examined, but that does not mean that the test actually measures and just the construct that is being considered.

Whatever our measuring instrument is, what we observe and evaluate is called an indicator, what we want to measure is the construct and *only* the construct. Each indicator evaluates a facet of the construct, has a connection with it, but it is not the construct.

It is very important to define qualitatively if the indicators reflect the construct. There are techniques that quantify this relationship, as for example in factor analysis. Content validity instead considers the content of the indicator (so the verbalization of the question whether it is an interview, the content of the graphic or textual being - if it is a psychological test).

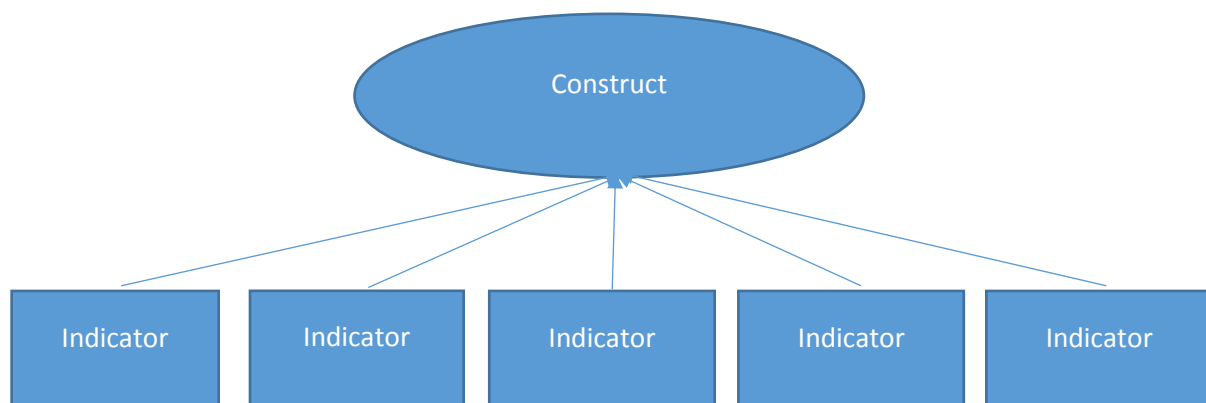


Table. Construct and indicator

There are multiple errors that can jeopardize the content validity

- Items do not indicate a single construct, but they point to two concepts simultaneously, that is, the rule of unidimensionality is not respected
- The items do not have enough explanatory clarity
- The stimuli must therefore be clear and unique. How much is clear an item? There are some guidelines for clarity of an item.

Consider this item:

"My Director of Complex Structure is representative of my department's vision and mission." How much do you think this phrase is correct from 1 to 7?

Now if we want to define whether this item has exhibit clarity or not, we should ask this question, which I find very useful as a preliminary tool for exhibit clarity. What does the subject need to know to answer this question? +

In order to answer to this item, you must know at least six things:

- What a Complex Structure Director
- What is the vision
- What is the mission
- The description of vision and mission of your department
- What are the vision and mission of your Director
- How much they collimate among themselves

The cognitive load is remarkable, probably an employee cannot interpret all these stimuli together and having to answer, and for this reason they follow a simplification process called heuristic. Knowing that this should be interpreted as a positive point for the Complex Structure Director (ie, the Primary of the Department) will give a good rating if they feel sympathy with the Director, or worse, if they are in doubt about the interpretation, will give a neutral answer.

The question is objectively too complex for the employee, which usually does not formulate the question, or the formula using different phrases.

Additionally, this question contains a considerable formal error: it try to measure two concepts at the same time. And this is deduced from a very small word, the word "and". In fact, the item contains "vision and mission" and this is asked for opinion with respect to two arguments giving a single chance of responding to the subject, i.e. from 1 to 7. What can the respondent do if he has different opinions in comparing the adherence of vision and mission of the Director?

The item is formally wrong. That is why we do not recommend using the "and" particle, as it may suggest measuring two different concepts in the same item. Imagine having a tool that measures height and weight, but only returns a number (the average of the two measures), the result would certainly be poorly interpretable.

Another tip to improve the clarity of items is to avoid the word "or". Imagine this question: "Do you feel like a fan or a supporter of your business?". The possible answers: True, Falso, I do not know. The ambiguity is dictated by the fact that it is not understood when the requirement is met. The candidate who feels only a fan but not a supporter can be considered a subject that has to answer "true"? The level of confusion increases, and with it the statistical error.

Any error in clarity makes the test invalid from the point of view of the content. As it would start to measure more things together: the construct and the level of general culture.

The same item can be formulated in different modes, giving you greater or lesser complexity in understanding. Let's imagine these different items that measure the same concept:

- $2 + 2 = ?$
- Two plus two is?
- Return the sum of the two value additions of two.

The question undoubtedly refers to the same problem, but the formulation impacts significantly on its perception. The third item undoubtedly measures both computing skills and language skills.

We do not recommend using **double or triple negatives**. Often such questions are included as a control item. A test may require the same concept in positive and negative terms. For example, "I'm happy most of the time" and - at another stage of the test "I'm not happy most of the time". It is obviously the same concept, placing two items of this kind in the test can be useful in understanding the subject's level of consistency, or to see if there is a tendency for the subject to manipulate the results. The coherent subject tends not to contradict himself.

Instead, it becomes complex to admit questions with **doubles or triple negations**; these are stimuli that obviously confuse the subject, leading to a greater chance of error. You think, "I've never avoided not bringing my mistakes back to my Director." After the first negation, it becomes a logic exercise, not a measuring instrument.

Before constructing the items, however, it is necessary to define the construct and its facets. This task is sometimes simple, sometimes complex. Many classifications of personality disorders (DSM-5, ICD-10) already have a clear definition of the construct. Each disorder has a clear definition and a set of criteria that, if present in a certain way, indicate the presence of a construct. To the constructor of the evaluation tool should just extract these definitions and put them into the test interpretation manual. However, if the construct is classified in different texts, it is not said that such a clear classification appears within a book. Suppose you want to build a test on Freud's defense mechanisms. What definitions do you refer to? To Freud's first or the latest conceptualizations? As defense mechanisms are conceptualized within multiple narratives, it will be the task of the evaluator to extract the most appropriate definitions and facets to measure the construct. Obviously, even reading the same book or series of books on the subject, it is not said that every test builder comes to exactly the same conclusion. For this reason, it is not enough to state in a test that "the objective of the test is to measure the defense mechanisms according to Freud", but we must mention a definition or a clear definition of the construct and its facets.

The next step is to build the items and make them evaluate bu

- Experts of the subject (researchers and university professors with experience in the field of evaluation)
- Test target subjects (persons to whom the test is performed)

It is possible to carry them on:

- Quantitative analysis. Asking the subject directly (for each item) how much the person perceive that the item measures the construct
- Qualitative analysis. Asking open questions about the proposed items and then conducting a content analysis.

Face Validity

The face validity indicates the degree to which the assessed subject perceives the content of the test as inherent, consistent with the objectives of the evaluation. To understand the face we must ask ourselves and ask the subject how he/she perceive the test.

In this case, we must ask how much stimuli are perceived as consistent with a job selection objectives. The face validity has an important task in the selection process, it is not a good experience for being evaluated to be subjected to stimuli that it perceives as extraneous to the role it aspires. Therefore, tests that measure unclear indicators for the subject are useful, as they will hardly be able to manipulate them, but at the same time they may seldom have faults. Think of the example of submitting a graphic test to a candidate for a selection of management. Delivery "I ask you to draw a tree on this A4 sheet" can be certainly useful, as the subject will hardly manipulate the test, not knowing what and how to measure personality features, however, it may seldom slip of face validity, as the subject might wonder what the connection between a tree design and work-related tasks is.

Criteria Validity

Validation of content validity and face validity is just the beginning of the validation process of a selection tool. In this process, it is very important to evaluate the validity of the criterion.

The criterion is an external test factor that is believed to be correlated positively or negatively with the selection tool that we are validating.

The criterion validity is often based on Pearson's linear correlation index. This index has the function of detecting the relationship between two variables: in our case the test score or one of its sub-scales and the criterion examined.

$$r = \frac{\sum (x - \bar{x})(y - \bar{y})}{\sqrt{\sum (x - \bar{x})^2 \sum (y - \bar{y})^2}}$$

The linear correlation index of Pearson has a value between -1 and +1. The score obtained may result in three types of result:

- **Positive correlation (r = 1).** When the value of the first variable increases (x, the test or subtest), the value of the second variable increases (y or criterion); When decreasing x, decreases y. The analyzed constructs are similar, go hand in hand, they probably affect each other. Performance and intelligence often correlate positively, the greater the intelligence, the greater the performance
- **Negative correlation (r = -1).** When the value of x increases, decreases the value of y and vice versa. The constructs analyzed are dissimilar, opposed. The concepts analyzed are different. For example, stress and performance are negatively correlated with each other. When stress increases, performance decreases.
- **No correlation (r = 0).** The two concepts are unconnected. By way of example, anxiety and creativity have no correlation between them.

The more the r value approaches with |1|, The more the relationship is strong. A diagram that helps us define correlations is as follows:

How to interpret |r| Pearson-value

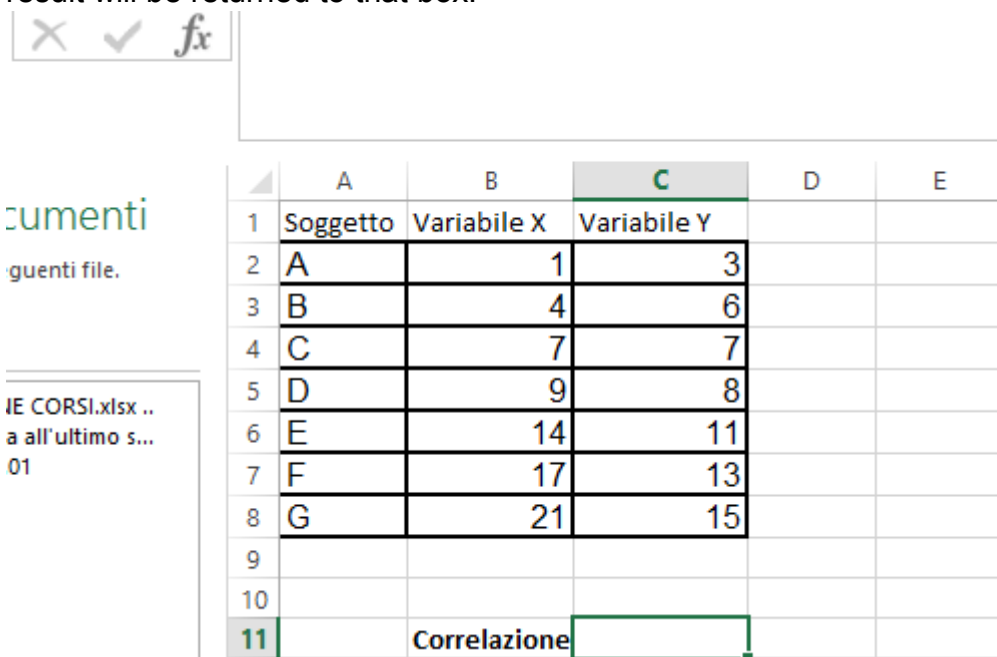
| | |
|-----------|---------------------------|
| < 0.2 | = very weak correlation |
| 0.2 – 0.4 | = weak correlation |
| 0.4 – 0.6 | = moderate correlation |
| 0.6 – 0.8 | = strong correlation |
| > 0.8 | = very strong correlation |

To be able to calculate simple linear correlation is sufficient Excel. In this case you need to have the data in this way

| Subject | Variable X | Variable Y |
|---------|------------|------------|
| A | 1 | 3 |
| B | 4 | 6 |
| C | 7 | 7 |
| D | 9 | 8 |
| E | 14 | 11 |
| F | 17 | 13 |
| G | 21 | 15 |

The first column indicates the participant in the study, the second column indicates the first variable and the third indicates the second variable, so the numeric values in the same line refer to the same subject.

You then enter the values into an Excel data matrix. It also defines in which box the "correlation" value is returned. As can be seen in the following table, the table has been copied, and in B11 "Correlation" was written and C11 was selected, so the correlation result will be returned to that box.




The screenshot shows an Excel spreadsheet with the following data:

| | A | B | C | D | E |
|----|----------|--------------|------------|---|---|
| 1 | Soggetto | Variable X | Variable Y | | |
| 2 | A | 1 | 3 | | |
| 3 | B | 4 | 6 | | |
| 4 | C | 7 | 7 | | |
| 5 | D | 9 | 8 | | |
| 6 | E | 14 | 11 | | |
| 7 | F | 17 | 13 | | |
| 8 | G | 21 | 15 | | |
| 9 | | | | | |
| 10 | | | | | |
| 11 | | Correlazione | | | |

The formula bar at the top shows the function icon (fx) and the text "Correlazione".

To proceed, click on the function icon, "fx". You will open a window with the functions Excel can do, select the "Correlation" function and then click ok.

Carattere Allineamento Numeri Stili



Documenti
guenti file.

IE CORSI.xlsx ..
a all'ultimo s...
01

| | A | B | C | D | E | F | G | H | I | J | K |
|----|----------|--------------|-------------|---|---|---|---|---|---|---|---|
| 1 | Soggetto | Variabile X | Variabile Y | | | | | | | | |
| 2 | A | 1 | 3 | | | | | | | | |
| 3 | B | 4 | | | | | | | | | |
| 4 | C | 7 | | | | | | | | | |
| 5 | D | 9 | | | | | | | | | |
| 6 | E | 14 | | | | | | | | | |
| 7 | F | 17 | | | | | | | | | |
| 8 | G | 21 | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |
| 11 | | Correlazione | = | | | | | | | | |
| 12 | | | | | | | | | | | |
| 13 | | | | | | | | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | | | | | | | | | |
| 20 | | | | | | | | | | | |
| 21 | | | | | | | | | | | |

Inserisci funzione

Cerca una funzione:

Digitare una breve descrizione di cosa si desidera fare, quindi fare clic su Vai

Oppure selezionare una categoria: Usate di recente

Selezionare una funzione:

- SOMMA
- DEV.ST
- MEDIA
- TEST
- CORRELAZIONE**
- RANGO.MEDIA
- RANGO

CORRELAZIONE(matrice1;matrice2)

Restituisce il coefficiente di correlazione tra due set di dati.

[Guida relativa a questa funzione](#)

OK Annulla

At this point, Excel asks to select the first variable data in matrix 1, so first click on the text box to the right of array 1 and then select the data affected by the first variable.

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|----|----------|--------------|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Soggetto | Variabile X | Variabile Y | | | | | | | | | | | | |
| 2 | A | 1 | 3 | | | | | | | | | | | | |
| 3 | B | 4 | 6 | | | | | | | | | | | | |
| 4 | C | 7 | 7 | | | | | | | | | | | | |
| 5 | D | 9 | 8 | | | | | | | | | | | | |
| 6 | E | 14 | 11 | | | | | | | | | | | | |
| 7 | F | 17 | 13 | | | | | | | | | | | | |
| 8 | G | 21 | 15 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |
| 11 | | Correlazione | =CORRELAZIONE(B2:B8) | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | |

Argomenti funzione

CORRELAZIONE

Matrice1 B2:B8 = {1;4;7;9;14;17;21}

Matrice2 = matrice

Restituisce il coefficiente di correlazione tra due set di dati.

Matrice1 è un intervallo di celle di valori. I valori possono essere numeri, nomi, matrici o riferimenti contenenti numeri.

Risultato formula =

[Guida relativa a questa funzione](#)

OK Annulla

You repeat the procedure for Matrix2 by clicking on the relevant text box and then selecting the data for the second variable. Then click ok.

=CORRELAZIONE(B2:B8;C2:C8)

| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P |
|----|----------|--------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Soggetto | Variabile X | Variabile Y | | | | | | | | | | | | | |
| 2 | A | 1 | 3 | | | | | | | | | | | | | |
| 3 | B | 4 | 6 | | | | | | | | | | | | | |
| 4 | C | 7 | 7 | | | | | | | | | | | | | |
| 5 | D | 9 | 8 | | | | | | | | | | | | | |
| 6 | E | 14 | 11 | | | | | | | | | | | | | |
| 7 | F | 17 | 13 | | | | | | | | | | | | | |
| 8 | G | 21 | 15 | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |
| 11 | | Correlazione | =B8;C2:C8) | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | |
| 21 | | | | | | | | | | | | | | | | |

Argomenti funzione

CORRELAZIONE

Matrice1 B2:B8 = {1,4,7,9,14,17,21}

Matrice2 C2:C8 = {3,6,7,8,11,13,15}

= 0,995743062

Restituisce il coefficiente di correlazione tra due set di dati.

Matrice1 è un intervallo di celle di valori. I valori possono essere numeri, nomi, matrici o riferimenti contenenti numeri.

Risultato formula = 0,995743062

[Guida relativa a questa funzione](#)

OK Annulla

The calculation is complete, if all the steps have been completed correctly, in box C11 we should have the correlation value. In this case this is a very high and positive correlation value, ($r = .9957$) the two variables indicate very closely related or very similar constructs.

=CORRELAZIONE(B2:B8;C2:C8)

| | A | B | C | D | E | F |
|----|----------|--------------|-------------|---|---|---|
| 1 | Soggetto | Variabile X | Variabile Y | | | |
| 2 | A | 1 | 3 | | | |
| 3 | B | 4 | 6 | | | |
| 4 | C | 7 | 7 | | | |
| 5 | D | 9 | 8 | | | |
| 6 | E | 14 | 11 | | | |
| 7 | F | 17 | 13 | | | |
| 8 | G | 21 | 15 | | | |
| 9 | | | | | | |
| 10 | | | | | | |
| 11 | | Correlazione | 0,995743062 | | | |

A second calculation often used in these cases is **linear regression**. The role of this formula is to evaluate the level of predictability of one phenomenon on another. The objective is to investigate the causal relationship between variables. In the correlation two phenomena co-exist, in the regression instead we want to investigate the relationship of cause and effect. The objective of regression is to construct a regression line, that is, a mathematical equation that can estimate the value of Y (predetermined variable or criterion), starting from the value of X (predictor). Technically, the X is a variable assumed to be the cause, the predictor, the determining variable, while Y is a variable that is supposed to be the effect, what is expected. The straight linear regression line has this mathematical formula. $Y' = a + bX + e$

Y' = the predicted variable, we use the apostrophe in the formula to indicate that it is an estimated value.

A = the intercept value, that is, the point where the regression line meets the Y axis

B = angular coefficient, indicates how many units Y increases when X increases in a unit

E = statistical error, this is a value not always quantifiable but still present, all psychological measurements are somehow inaccurate

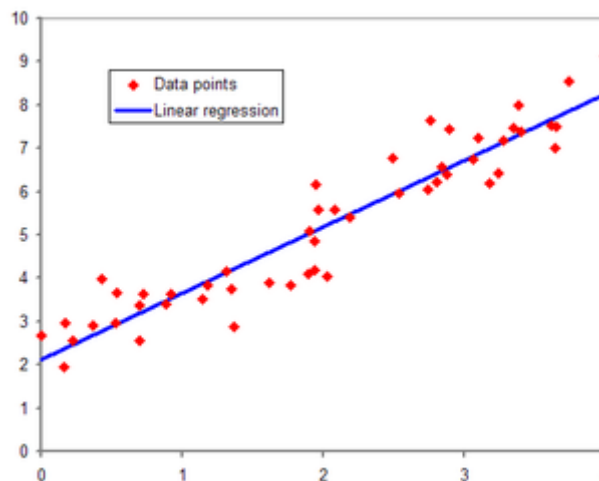


Figure 2. An example of linear regression

Note. The line indicates the regression line and the data trend, but the points are the individual data. As you can see the data is pretty close to the straight line, this indicates that the regression line provides a good estimate.

The **linear regression equation** help to better define this regression line, obtaining the value of a and b. The error is not used in the formula, but always recognized. Obtaining these two values is very simple to estimate Y when X is a given value. The angular coefficient is a value that depends on the unit of measurement of a concept and this can sometimes cause some degree of confusion, since the unit of measurement is a vague concept in psychology. There are no physical aspects that are measured but constructs that are deduced from the analysis of a person's behavior.

Let me give you an example, in many cases, the scores of psychological variables are detected by summing up all the values of a subject with respect to individual questions. Suppose you want to measure anxiety with 10 questions on which the subject can express himself by an evaluation from 0 to 10. The minimum score obtained by the subject will be 0, the maximum will be 100 (10 x 10). Let us imagine now that we have also measured a second variable, extroversion, and that for psychometric reasons (which we understand, more complex, more valid for a larger number of questions) we have 20 valid items at the end of the validation process, and also these Are measured on a scale ranging from 0 to 10. The minimum score is 0 and maximum 200. How can I compare the two scores? Of course, getting 100 at the first test or the second test will have very different meanings, furthermore, the first test will tend to have a variability other than the second, if my range of values is smaller, usually the scores are closer than the case where. My range of values will be wider.

For this reason, in many cases it is more appropriate to use the **standardized beta value** (β), which it's not affected by the differences between units of measurement. The paragraph on standardization will explore this useful practice in detail.

There are several types of validity criteria and will be described in greater detail in the following paragraphs:

- Diverging validity
- Convergent validity
- Concurrent validity
- Predictive validity
- Post-date validity

Consider this: The criterion validity process intend to collect a large amount of clues that together represent a validity test. None of these is a ultimate proof that the test is valid, but all together contribute to the validation of the test.

If the test is valid, we need to collect a whole range of data in the outer world that confirm it and these external data can be:

- physiological measures
- Other psychological tests
- Concrete and tangible events

Let's look together in the next chapters of what it is

Diverging validity

If I'm studying two constructs and these are opposite, dissimilar, assuming that when there is a construct there should be not the other, what kind of correlation should we get?

A negative correlation

Obviously, two opposing concepts are "avoiding" each other, they do not coexist. Easy to say, but you should demonstrate it with numbers.

Imagine having to validate a test that measures psychological well-being, we have built our items, conducted trustworthy measurements, studied item quality, and everything was positive. In order to evaluate the divergent validity, we must consider variables opposed to the concept of psychological well-being. I mention some examples:

- Anxiety
- Depression
- Physical symptoms
- Cortisol salivate
- Stress

We expect correlation to be negative and significant. To do this, of course, you have to collect a sample of participants, submit them:

- The test that we want to validate (test on psychological well-being)
- one ore more criteria (in our case anxiety, stress, depression)

Diverging validity exists if we actually get a negative correlation between these variables. I put some data in the following table to show how a divergent validation study could be set up.

| Psychological wellbeing | Anxiety | Stress | Depression |
|-------------------------|---------|--------|------------|
| 1 | 11 | 7 | 3 |
| 5 | 7 | 6 | 2 |
| 7 | 3 | 1 | 1 |
| 9 | 1 | 2 | 1 |
| 11 | 1 | 2 | 1 |
| 16 | 1 | 1 | 1 |
| 2 | 16 | 6 | 1 |
| 4 | 12 | 4 | 2 |
| 5 | 6 | 5 | 3 |

Linear correlation indicates the relationship between two variables. Therefore, it is necessary to repeat the procedure by analyzing the link between variables several times:

- Correlation between well-being and anxiety
- Correlation between well-being and stress
- Correlation between well-being and depression

Converging validity

Convergent validity is based on the assumption that similar variables should correlate positively among themselves: the more X increases, the more the Y increases.

If I want to measure validation of a burnout test, I can ask to myself, "What are other similar forms to burnout?" Or "Which variables do I expect from a positive correlation?". Some examples:

- Compassion fatigue
- Stress
- Cortisol salivate
- Physical symptoms

In this case I can apply some procedures, that is

- Take a sample of subjects
- Submit them to the test I want to validate (burnout) and test criteria
- Calculate Pearson's linear correlation
- Verify that - as expected - correlations are positive and significant.

The data entry procedure in the table is similar to the previous one, obviously in this case I expect positive correlations.

Concurring validity

Competitive validity is measured by the correlation between the test you want to validate and a valid test that exactly matches the same construct. If I want to validate a burnout test, I'll have to look for a valid test on the same topic, such as Maslach Burnout Inventory. Obviously, I expect the correlations to be positive and significant, otherwise there is something wrong. Burnout can only relate to burnout. In this case, correlation is only between the two variables involved, there is no need to repeat the procedure.

Predictive Validity

Predictive validity is - in my opinion - one of the most important and complex factors to be analyzed. This type of validity is intended to evaluate how much a test can predict an event. In the end, all validation of a personnel selection process should be based on this. The bottom line is this:

"How much the tools we have selected are able to assess whether the chosen person is the most suitable?"

This is a complex problem obviously. For many reasons. But what indicators do you need to calculate predictive validity?

- A test or subtest
- A concrete and specific event or behavior
- A time range

What makes predictive validity more complex is precisely the time range. As you can imagine, for other types of validity there is no need for a great time span. We sample a group of employees, test them, build a matrix of data, we do the correlation analysis to have our result. On a business day we could calculate divergent, concurrent, and converging validity.

For predictive validity, however, it is necessary to wait time before calculating the results. And it can also be a matter of years. For this reason, many companies are discouraged from conducting predictive validity tests even though they are absolutely useful tools.

Let's try with a concrete example to understand how predictive validity can be used. Let's imagine having to validate a sales skill test. How do I know if this sales test is effective in selecting skillful sellers? I have to look for a criterion indicating the seller's effectiveness. Some positive examples are

- The turnover
- The number of customers
- The number of pieces sold
- The number of customers who buy a second time etc.
- The level of customer satisfaction

Other negative indicators may be

- The number of complaints
- The percentage of customers who rescind the contract
- The number of refunds requested by the customer (obviously excluding those due to a technical problem in the product)

If I conduct a personnel selection using a validation test, I may decide to take 20 new business in the team. Each of these has been selected for different specific characteristics, one of many is just the test result. How do I measure if the test was "good" in predicting sales capability? I can certainly not measure the sales, turnover, and other indicators exposed a month later. In fact, we have not yet given the time for the business to set itself in the context, to know the products well, we are still in the first phase of socialization work. I will then have to choose a longer time interval. One year can be an appropriate measure in this case, but certainly not the only one, the researcher will decide the time based on:

- The peculiarities of research
- The time availability
- The nature of the product
- Customer requests

In principle, we should choose long times, but it is not always so. People, they know about the long run, is true, but do not select a really long time because:

The greater the time distance between predictor and criterion, the more likely it is that other events will be between the test and the expected event

If I conduct a personality test of candidates for a military position, I can only select clinically healthy subjects that do not have personality disorders or other absolutely unpopular features. Let's imagine we have 20 subjects and have set more prediction analysis at 5, 10 and 20 years. During the year 16, one of the 20 subjects kills his wife, analyzing the case later, it turns out that the subject was not completely healthy from a psychological point of view.

Did the selection test not be predictive, or other events happened in the meantime that led to a difficulty, a disorder in the person?

Difficult to know, the only truth is that in such a long time there are many events that could have impacted the person, such as: related work stress and traumatic events.

That is why in a well-constructed selection process, it is not enough to conduct only the input test, but also other monitoring tools (control tests, employee listening teams, etc.). In predictive analysis, it is advisable to use simple linear regression, although some use correlation. We talk about predictability in the strict sense here, because we have a past event and a future event that is supposed to be in a causal connection. Not always, however, a long analysis time is available, in these cases, postdiction analysis is used

Postdiction Validity

Postdiction analysis is the correlation between an event that has already occurred and a test that you want to validate. This type of analysis does not require a time interval between the test and the connection to the criterion. Reconnect to the previous example. Imagine having a company that already has 80 sellers, it certainly wants to strengthen its staff and apply a new test measuring sales capability: it wants to validate it. Of course, he could make a predictive analysis, spend a year and actually ... wagering on the potential of that test, hoping to be reliable. He will therefore have to submit the test to the candidates and will select the best on the basis of that test, hoping to be a good predictor. It will then have to wait a year to see if the test has been valid.

Something quicker and more suggestive in this case is post-seasonal analysis. You may consider submitting the test to the 80 sellers already available and correlating the result to the test with the actual sales results. This type of analysis is very useful for various reasons.

1. It takes much less time

2. It allows to analyze the test results on very different ranges. If I had to give the test in the selection state, I would only have the opportunity to measure the results of those who only get high scores on the test, as I obviously would not logically select candidates who obtained a low test score. In fact, however, nothing excludes that candidates with low test scores have a good performance. Not having them selected, we do not know

3. Does not have decision-making risks. In fact, no decision is made about staff after that test, while in selection we take the risk of selecting inappropriate or inappropriate people.

Reliability

Reliability is "the psychometric property of the accuracy with which a test or scale measures a certain psychological variable. Note that reliability does not tell us whether the test measures what we would like to measure - this is validity - but it is an index of the precision of the measure that the set of items allows us to obtain. The measurement must be accurate so that it must obtain the smallest possible measurement error measurement "(Chiorri, 2011).

Reliability can be defined in its specific dimensions (Kline, 1993):

- Replicability
- Homogeneity
- Objectivity

Replicability

When we are faced with a measuring instrument, we expect this, in later measurements of the same object, to return the same result. If, for example, weighing the computer with which I am writing this text and getting 2.3 kg, weighing it the next day I expect to get exactly the same result: 2.3 kg. Certainly, depending on the sensitivity of the balance we could discuss grams or milligrams, but certainly any balance on the market should not weigh 4 or 5 kg, as it would not be reliable.

We expect the same on psychometric tests. Replication is the ability of the test to return the same result when applied to the same subject. If I administer a test of intelligence to a person today and in a month, it should give me exactly the same result. There is no explanation for an increase in sensitive intelligence in an adult subject in such a short time.

However, there are some elements that can undermine the measurement of the replicability of an instrument:

- **Memory and learning effect:** any re-administration of the test will never be the same. If I am subjected to an intelligence test and then I repeat it after 15 days, the first administration will allow me to learn something about the nature of the stimuli and their solution. In the second administration I will be more prepared and therefore most likely I will get a little better result.

- **Consistency effect.** People tend to assert concepts in line with what has already been stated above. During a personality test several concepts are defined on their own, in the second administration the subject may tend to repeat themselves, not so much because he feels certain certain statements but consistent with the previous responses.
- **Instability of the variable.** If we expect that personality and intelligence are stable factors, we cannot say the same about variables like mood. If a repeatability measure on "unstable" variables is expected, it is normal to expect a variation, but it becomes difficult to see where the instrument's reliability is at its end and the variable's instability begins.

To test whether the instrument we are using is replicable, we must apply a procedure called test-retest. You administer the psychometric tool, expect a time interval and then re-administer it. The test-retest correlation is the mathematical reference calculation. This is a simple linear correlation between the results at first and second administration. Obviously, we expect the two results to correlate. Psychological measurements are more inaccurate than physical ones, so we do not expect the results to be exactly the same (a person with QI = 103 at first administration, could in fact have a second QI = 106 or 102, for example, would be It is strange to have a 140 or a 83). For this reason, test-retest correlation is rarely equal to 1 (perfect positive correlation). Usually, trust values are considered acceptable to or above .80 (Boncori, 2006).

The data matrix can be set this way

| Subject | First test | Second Test |
|---------|------------|-------------|
| A | 1 | 3 |
| B | 4 | 6 |
| C | 7 | 7 |
| D | 9 | 8 |
| E | 14 | 11 |
| F | 17 | 13 |
| G | 21 | 15 |

Standard Error

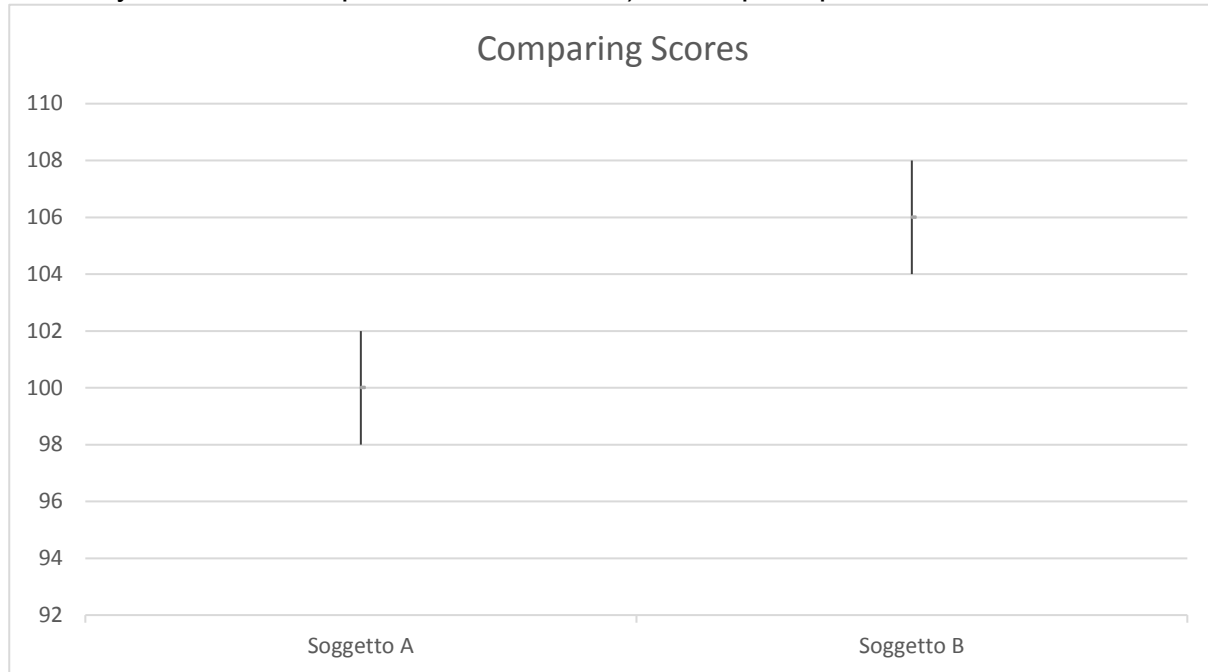
The standard error formula is based on the confidence range and indicates the degree of error we are expecting. If the standard error index is equal to 4 and a subject scores 100, we have to expect the true value to be between 100 ± 4 .

This, in the selection process, also allows us to assess whether two subjects are actually different in terms of score. Apparently, two subjects who score scores 100 and 106, respectively, may appear to be people with different levels of presence of the feature, yet this cannot be defined without the help of the standard error. For example, if we had a standard error of 2, we could define subjects as different:

- The first would have a true score of 100 ± 2 (ie between 98 and 102)
- The second would have a real score of 106 ± 2 (ie between 104 and 108)

The ranges do not intersect, the subjects are different. Obviously, scores and related standard errors are estimates, everything is possible (delivery errors, occasional events

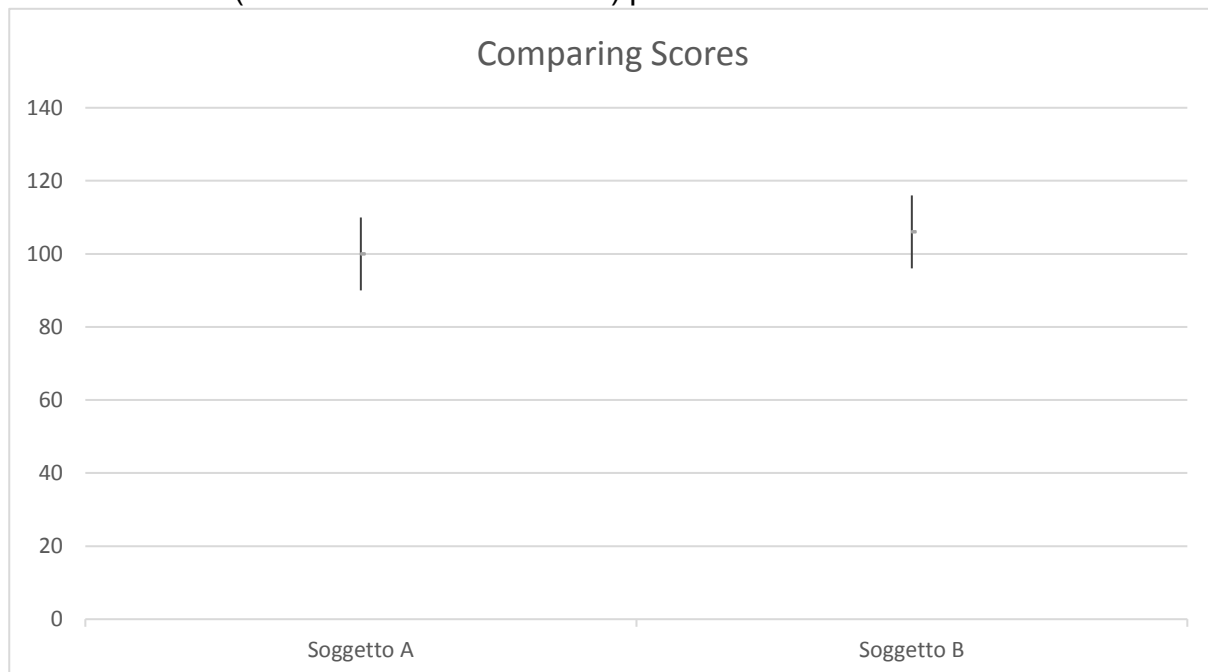
that may have affected performance or else), but in principle the scores are different.



Let's imagine now having the same test but a standard error of 10. Everything changes, the discriminatory power of the test is absolutely different:

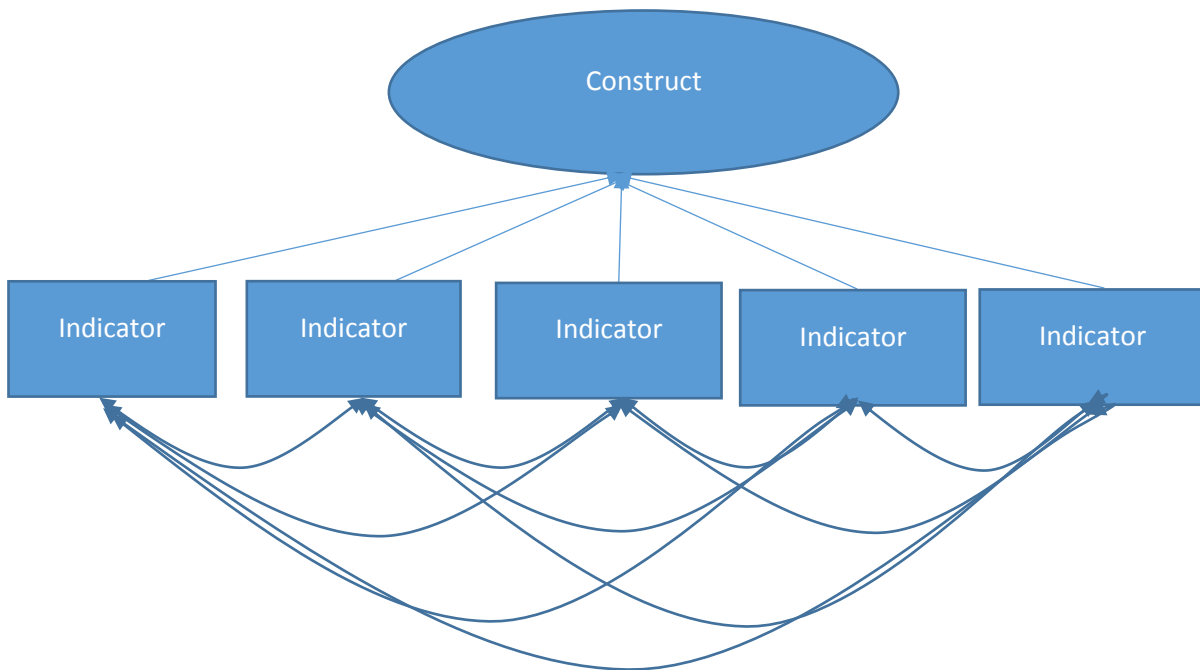
- The first would have a true score of 100 ± 10 (ie between 90 and 110)
- The second would have a true score of 106 ± 10 (that is between 96 and 116)

It is not possible in this case to discriminate subjects. Reliability, therefore, is not only useful for defining the stability of the test, but also for assessing its discriminative potential. If the scores of a test vary from administration to administration, when comparing subjects one has to consider that part of the result is actually due to the subject's characteristics, the other to the (more or less considerable) portion of the error.



Homogeneity

A second way for expressing reliability is homogeneity. This characteristic expresses the degree to which each sub-sample of the test equals the measured characteristic. It is expected that if different questions are to measure the same construct, they should be positively correlated with each other. This data can be measured in different ways. The logic is the following



If the relationship between the indicators and the construct is true, that is, the indicators represent the construct, it is also important that the indicators are linked to one another (that is, the positive relationship is represented by the curved lines in the proposed scheme).

You can consider items of the same sub-scale as mini-tests, each one to give an estimate of the presence of a particular feature. Obviously, if they are measuring for the same thing, they should have similar results. If I do a table with 10 different instruments, there will certainly be a difference among them, a small error due to the sensitivity of the instrument, but everyone should have similar scores. Likewise, if I have 10 questions to measure the anxiety of a certain subject, and that subject on a scale from 0 to 10 is set to 7, it is expected that similar items will have similar scores (eg, 6 , 7 or 8), it is unexpected that the subject answers 2 or 3 on similar items. We might get to ask if it's actually "mini-test" that measures the same feature.

How can you have an estimate of how consistent items are to be homogeneous? The two most commonly used reference formulas are the Alpha of Cronbach and Kuder Richardson. The Cronbach Alpha formula is the following and is used on items that have more than two response options (eg, 5-point Likert scale):

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k S_i^2}{S_{sum}^2} \right)$$

Instead, the Kuder Richardson formula is used for cases of dichotomous items (that is, they have only two possible responses, eg items yes / no and true / false items).

$$\rho_{KR20} = \frac{k}{k-1} \left(1 - \frac{\sum pq}{\sigma^2} \right)$$

These two formulas calculate the level of internal consistency. The minimum level of acceptable internal consistency is variable, some authors say that it is sufficient to value .70 (Nunnally, Bernstein, 1994), others claim that sufficient level for good internal coherence is .80 (Boncori, 2006). Indices therefore give us a global value of trust. In validating a test we can find ourselves in two situations

- Reliability has an acceptable level
- Reliability does not have an acceptable level

When we have an acceptable level of internal consistency, no specific scale changes are needed, but when the internal consistency level is poor, we need to understand the reasons, especially if we are near the limit values (eg, alpha = .50) How much the scale could be saved. Certainly if the alpha was equal to .20, there are few possibilities to keep the set of items intact, probably rebuilt from the beginning. But if the level is not high, you should understand what the reason is, and often this lies in some of the questions that obviously are not consistent with the rest of the scale, in other words they measure something else.

Identifying items that negatively impact on internal consistency helps us because it allows us to eliminate them or allocate them to other scales in order to have a consistent scale.

There are two ways to deepen the item's quality.

- Calculation of Cronbach alpha excluding one item at a time. Many statistical software let you calculate the alpha level of a certain set of items, without considering them one at a time. This way you can study what the problem items are.
- The calculation of the item-total correlation. This is the correlation between a single item and the whole scale. This value indicates how much a question is representative of the set. Excessively low values indicate a low consistency of the item within a single scale.

This type of procedure allows for better scale optimization, as it delivers or allocates items differently. The alternative to a detail item study is the full scale rebuilding.

Objectivity

Objectivity is the degree to which different evaluators come to the same test interpretation, that is, the same attribution of the scores. The psychometric test, the selection test is such if it has little interpretative margin. That is precisely why the scoring system should be as clear as possible to prevent scores from being interpretable. The use of interpretation in the psychometric evaluation causes a problem in the measurement: the score of the subject depends on the evaluator and the subject. There are many cases in Italy where psychological testing on the offender was a source of debate. The same offender, who faces exactly the same responses to the same Rorschach Test, should have exactly the same interpretation, even though there are two different evaluators. Yet this sometimes does not happen for the most varied reasons:

- There are different interpretive schools of projective tests and graphic tests
- When the test is based on a qualitative interpretation, the weight of the evaluator comes into play. It is not possible to clearly define the absence or presence of certain criteria
- Evaluators may have different experiences and then apply the method with greater or lesser effectiveness

Whatever the reason for different interpretations of the same subject by different evaluators, we are faced with a case of poor objectivity.

Objectivity is measured when there is no unambiguously clear method for attributing scores to subjects. All cases where qualitative factors emerge require an objectivity calculation. Some classic examples of instruments in which objectivity is calculated are:

- Graphic methods
- Projective techniques
- Observational Techniques

Usually, only the questionnaires have a high level of objectivity, because the scoring modes are mechanical, they can be operated by a computer, there is an automatic scoring system. In graphic methods, projective and observational techniques, this is not completely possible. When you score a questionnaire, if you have ten questions that measure anxiety with a score of 1 to 7, and the general level of anxiety is calculated by summing the scores of each question. There is nothing that can be interpreted or changed in the interpretation, there is no chance of error or misunderstanding among different evaluators. The manual will provide the range within which it will be appropriate to define the score as high, medium or low. If, however, my interpretation method is related to the handwriting, some features of a drawing, the interpretation of ink stains, or simply open answers ("tell me a story based on this image"), the system needs a more complex coding manual. This is because we face very simple thing sometimes: if in the questionnaire the subject can respond in the predetermined mode by the test builder, when we have projective projective test protocols or simply open response questions, the answer possibilities are infinite. The indeterminacy of possible responses, on the one hand, leaves the person the freedom to express themselves, on the other hand, requires a clear and undisputed system of evaluation of responses, resulting in a certain amount of statistical error.

As an example I write one of the most rigorous authors in Rorschach's interpretation of the FC score: "Unfortunately, we do not have any absolute and easy-to-use rule to highlight the CF response" (Exner, 2003, p.58). This simple statement can allow us to understand how projection techniques are something different from the classic psychometric test.

How to measure objectivity

There are several methods to measure the objectivity of a measure, the most common being:

- Cohen Index k
- Cochran Index Q
- Multiple Correlation Index

Cohen's index k serves to evaluate the degree of average concordance between two evaluators. Therefore, a sample of subjects is considered, the two evaluators, independently and blind, attribute scores, and then examine the proportions of responses common to the two evaluators

$$k = \frac{P_{obs} - P_{exp}}{1 - P_{exp}}$$

The main advantage of Cohen's formula is its easy calculation. The limit is that in this way we can only study the concordance between two evaluators and not by a larger number of subjects.

An example of research based on the calculation of K's of Cohen was conducted by Dazzi and Pedrabissi (2009) wanted to study the metric qualities of a graphological method. She then submitted 100 signatures to two evaluators who would have to interpret the subject's personality using Big Five personality descriptors. If we assume the objectivity of the graphological method, there must be a link between the graphological evaluators' interpretations and the Big Five test score, and we should also expect the two evaluators to give similar interpretations if not exactly the same (high inter-rater reliability). However, in this study, no high-objectivity or coherence between the graphology and the Big Five approaches emerged.

A second formula used to assess the level of objectivity is the Cochran Q test. This test:

- Enables more than two odd number evaluators
- Allows evaluators to express themselves through dichotomies (eg, suitable or not suitable)

The Cochran Q formula is:

$$Q = \frac{(k-1)(k \sum_{j=1}^k G_j^2 - (\sum_{j=1}^k G_j)^2)}{k \sum_{i=1}^n L_i - \sum_{i=1}^n L_i^2}$$

If multiple evaluators (even odd numbers) that are not expressed through dichotomies are required, use the multiple correlation index.

Standardization, sampling and context effect

Often, you may simplify the validation process by simply selecting tools already validated on standardized samples. These are already commercially available measuring instruments that have been subjected to targeted people and are presumed to have all the right features for a particular selection process. This is often enough to conduct a good selection, but it is not the most accurate process possible. It is always advisable to remember that each selection process has its own specifics. How do we think that collecting data on selections for different sectors and companies is valid for all contexts? How do we think that selections for different roles can be flattened on the same statistical indicator? How can we think that performance assessment indicators are the same for all companies?

Each company has its own specificity, its goals and its measurements to be conducted. For this reason, it is important - ultimately - to conduct a whole series of verification operations on your personal selections, and not just refer to the official validation. As general statistics state a concept, it is not said that the same is true in exactly the same way in the specific context in which we are operating.

As Watzlawick and colleagues write (1964, p. 14), "a phenomenon remains inexplicable until the field of observation is broad enough to include the context in which the phenomenon occurs."

In addition, as Campbell and Stanley (1966) report, "a warning is needed that introduces some of the thorny problems in the science of induction, resulting from a persistent reluctance to accept Hume's truism that induction or generalization it is never fully justified on a logical level. In fact, while problems related to internal validity can be solved within the limits of the logic of probabilistic statistics, questions about external validity cannot be logically overcome in a clear and definitive manner. Any attempt to generalize implies, in fact, an extrapolation in a domain not represented in the chosen sample. [...] Logically, there is no generalization beyond these limits, ie no generalization tout court is possible. Nevertheless, we also try to reach valid generalizations by striving to formulate hypotheses in the form of general laws to control such generalizations under different conditions, although they are also characterized by the same degree of specificity.

These general context laws clearly affect how data can be interpreted, and this concerns any type of test. Mutual evaluation between candidate and company begins long before they meet. The candidate formulates an assessment of the company, making impressions using information on the web, on the announcement, about her general knowledge about the company in the application area of a specific company. When the candidate is submitted to the selection process, there are many aspects that are sometimes difficult to control such as the context, interaction with other candidates, impact with the selector, etc. The candidate, if submitted to a selection that takes place at the premises, can infer from the aspects of culture and organizational climate entering the company, thus formulating the deductions on how to live in a given work environment. What we want to express at this stage is that it is not possible to be completely neutral. Communication is inevitable and influences the candidate in some direction. Of all the aspects that deserve an in-depth study (beyond the validation of the test on the general sample), the most noteworthy aspect is the

evaluation of external validity, each company has different roles and tasks, so necessarily the indicators Of performance (criteria) should be re-evaluated on the sample under review.

For example, if my general sample evaluated the statistical correlation between the result obtained at a sales test and the sales revenue of the seller in the following year, based on the sale of tangible assets (eg shoes), it is not said that the same test has external validity for the sale of services, for example, or it is not said that the same test functions in a different socio-economic context.

The impossibility of overlapping contexts and situations makes validation a contextual and cultural process as well. It fits in a specific context: social, economic, cultural, corporate that cannot be forgotten or not considered. Collecting data in a particular context is necessary.

A research that I conducted a few years ago (Vitale, 2010) has shown that the context influences the production of the responses of the subjects. The aim of the research was to evaluate how the context of selection influences the responses of the subjects. The study compared the responses of 120 subjects in a selection of staff with 120 subjects (comparable by age, gender, and degree of education) tested during an exercise. What changes in the two situations is the play, present, and high value in the selection state, absent in the exercise condition. A measuring instrument, to be defined as such, should be independent of the context, should simply put in place an objective measurement. Yet this is not, the very context of selection influences significantly the way people face stimuli.

The test on which the analyzes were conducted is called Zulliger Test and is a projective test consisting of three ink stains that was used by the State Police in Italy for staff selection (Ungaro, Borrelli, 2006).

Projection type tests are clearly distinguished by the questionnaires, as the objective is to understand how the subject plays a deconstructed stimulus (the ink stain). In this way one can understand how the subject structure the reality, starting from a ambiguous stimulus. What distinguishes these destructured stimuli is also the poor understanding of the subject of the meaning of the answers that, when the subject states in a structured questionnaire that "I like to talk and interact with people" knows or imagines that it is something linked to relationships, sociality, or extraversion. It will be harder to deduce the meaning of the interpretation of ink stains, for example, by interpreting what it may mean to have seen an insect in a particular little detail of a certain ink spot.

This lack of knowledge of stain interpretation induces less conscious filtered responses, and therefore hypothetically more "real" responses. This is generally a mistake as shown by research (Vitale, 2010). Certainly, the subject knows less about the meaning of certain responses but does not filter it. Scores obtained from subjects in the two experimental conditions (selection vs. neutral context) were in fact quite different.

Here are the results obtained from the research

Table. Comparison of scores between context and neutral context

| Index | Chi-squared | Degrees of freedom | Significance |
|--------------|-------------|--------------------|---------------|
| R | 2,84 | 1 | N.S. |
| G | 0,61 | 1 | N.S. |
| D | 0,04 | 1 | N.S. |
| Dd | 0 | 1 | N.S. |
| Dim | 30,16 | 1 | *** (p<0.001) |
| F | 12,14 | 1 | *** (p<0.001) |
| F+ | 11,99 | 1 | *** (p<0.001) |
| F+- | 7,15 | 1 | ** (p<0.01) |
| F- | 34,52 | 1 | *** (p<0.001) |
| M | 7,25 | 1 | ** (p<0.01) |
| FC | 15,64 | 1 | *** (p<0.001) |
| CF | 8,09 | 1 | ** (p<0.01) |
| C | 0 | 1 | N.S. |
| FC'n | 11,51 | 1 | *** (p<0.001) |
| C'nF | 8,33 | 1 | ** (p<0.01) |
| F(c)+ | 11,43 | 1 | *** (p<0.001) |
| F(c)- | 33,7 | 1 | *** (p<0.001) |
| MA | 3,06 | 1 | N.S. |
| mi | 5,12 | 1 | * (p<0.05) |
| A | 0,08 | 1 | N.S. |
| H | 4,08 | 1 | * (p<0.05) |
| Ad | 0,93 | 1 | N.S. |
| Hd | 8,81 | 1 | ** (p<0.01) |
| V | 15,2 | 1 | *** (p<0.001) |

As you can see from the table, there are different and remarkable differences between subjects in the two experimental conditions, it is possible to study the significant differences between groups affecting many areas of the test on the last column.

The study has shown that even in tests where the response is pushed by unconscious factors, these are mainly dependent on having to perform a test that has a stake in the workplace.

The results can be summarized as follows:

- **Increased stereotyped thinking.** The selection context had a higher frequency of vulgar responses (V). Vulgar answers are common, stereotyped responses, interpretations commonly given by subjects. Why are these being given more frequently by subjects in selection? This is easily explained by theories of impression management and self-presentation. When there is a risk, the subject experiences a sense of anxiety. Giving an extremely creative or unusual answer is perceived as a risk. Seeing a leaf in the first spot of the Zulliger Test is a common answer, many people see a leaf in that stain, common even without risk (few people can confute that there you can see a figure that looks like a leaf), look instead Something completely different as "a cow with the earrings" in the third spot is certainly a creative and unusual answer. The selection candidate, more or less consciously, does not want to risk it. For this reason, it will statistically rely more on vulgar answers.
- **Greater attention to formal adherence (F +).** Formal adherence is the degree to which interpretation approaches to the true shape of the stained or elaborate detail. Less the interpretation resembles the stain, the more dense the alert in the evaluated subject, which therefore avoids in the selection contexts of giving imaginative answers.
- **Less attention to human interactions (H).** The subject in selection lives human interaction with stress, as human interaction is associated with evaluation
- **FC'n:** Most present in neutral conditions, they represent a psycho-diagnostic level for a valid control of anxiety and depression (Ungaro, Borrelli 2006) - Cenesthetic Interpretations: Most present in neutral context protocols are (if very high) Bring them to think of themselves, introverted, linked to their ideas, artists and intelligent people. " - Inhibitor details: Mostly present in neutral context protocols, tend to be unusual responses, Giambelluca writes, Parisi, Pes (1995): "There are answers where the subject interprets only a part of what is most commonly seen as a whole." They are people of inhibition.

How to Reduce Recruiters Evaluation Errors

Personnel selection is a complex task. And as it happens in the face of all complex tasks, man does not use precise problem analysis strategies but heuristic called shortcuts (Anolli, Legrenzi, 2006; Bonini, Del Missier, Rumiati, 2009). The heuristics, as stated above, are quick modes of thinking that simplify thought and speed up the solution. They are not based on a careful analysis of the problem in all of their data and therefore can increase the probability of statistical error. The most common errors in the personnel selection process are:

- **Errors of judgment:** subjectivism of the evaluator, intuitive elements; The tendency to describe in objective terms what is the expression of one's personal subjective interpretation
- **Systematic error:** tendency to overestimate in relation to its mental attitude, mood and character. For example, the optimist will tend to give more positive evaluations, while the pessimist will tend to be more severe.
- **Halo Effect:** a tendency to judge a feature based on judgments that have on other features, for example polite subject judged even intelligent or vice versa. The only effect is the tendency to express a general rating based on a single variable (positive or negative). YES has a single effect even if the selector expresses a positive or negative opinion on individual elements of the selected, based on a general view. It can be said to have a single effect even between a candidate and the other (sequence effect), if you interview a normal candidate following a poor candidate, the first will seem better than it is because the mind tends to assess reality in comparative mode.
- **Contrast Failure:** Trend to Judge Others Contrary to Your Way of Being Cheerful / Sad, Safe / Insecure.
- **Projection error:** the unconscious tendency of transferring their own way of thinking and feeling in others, more generally projecting their own and personal elements in the interpretation and structuring of external reality. This process, for example, leads us to better evaluate features and values found in others and that we belong or attribute them (resemblance effect).
- **Introjection errors:** this is the opposite of the projection for which they attribute themselves to the traits, elements, attitudes of others that are experienced as theirs because they are pleasant and desirable. Introjection is also to safeguard the image of self and increase self-esteem.
- **Rationalization errors:** this refers to that attitude that involves the assignment of rational features or logical interpretations to phenomena represented only by vague insights that little have rational
- **Mistakes in structuring the interview:** in poorly formulated questions, capable of suggesting answers (for example, in the judicial field). Errors that may arise from personal viewpoints, points of view that the interviewer may have and which may interfere with the judgment of a candidate, for example, extracting the candidate's source, commonplace.

The role of physical appearance in personnel selection

One of the most common bias in the selection is the physical appearance. The aesthetically beautiful people, in fact, tend to be overvalued by expert breeders. A good physical appearance, which can certainly be required in certain job positions, should not become a variable that also affects other variables under evaluation (halo effect). Many evaluators, moreover, are unaware of having this bias. There are remarkable meta-analysis to demonstrate the relationship between physical beauty and social perceptions (Feingold, 1992), although some studies show opposite results (Caki, Solmaz, 2013).

Prejudice against obese

A study by O'Brien and colleagues (2013) has shown that the physical aspect counts significantly on the perception that the breeder makes of a curriculum. An expert evaluator

should consider the curriculum data, the results obtained by the person, who obviously remain the most predictive aspects of a person's performance. In this study, 102 staff recruits were recruited, and their task in this research was to evaluate different curricula and attribute to them the following points:

- Starting salary
- Probability of selection
- Perceived leadership potential

The participants also responded to questionnaires related to

- Prejudice against fat people
- Authoritarianism
- Social domination
- Evaluation of physical appearance

But the participants did not know anything about the experiment. The same identical curriculum appeared in the study, which was the same experience, the only variant of curriculum pairs was the photo. In one case you had a woman's picture before performing a bariatric surgery (BMI = 38-41), in the other copy of the curriculum there was the picture of the same woman after undergoing bariatric surgery, So much slimmer (BMI = 22-24).

The aim of the researchers was to assess whether the experts would be impartial (assigning similar scores regardless of the photo, or, if they had been influenced by the aesthetic appearance, giving scores more favorable to the post-surgical photo version. That the evaluators - even the experts - are greatly influenced by the aesthetic aspect. In addition, such discrimination is more present in the assessed that they have a higher level of implicit injury

Having a cautious look is a factor that is certainly useful to the candidate, showing attention and respect for the time of selection, and is certainly an aspect to consider in all professions where human contact is central but should not significantly affect Other domains. It should only cover the “physical appearance” rating box. What's more often happens is that this effect alone has effects on other factors, such as leadership potential, middle salary, management skills, which are certainly unconnected to the physical aspect.

Research about First Facial Impression

There is a flourishing scientific research about the impact of faces on social perception. Two centuries ago, Cesare Lombroso had suggested that physiognomy could tell us something about the subject's personality, this hypothesis has never been confirmed, leading at first to little attention to this subject. The disconfirmation of this hypothesis has led the search to connect hypotheses to the face as unambiguously lombrosian hypotheses. We know though that

Physiognomy ≠ Personality

This does not mean that it does not affect other psychological variables. And the first facial impression is remarkable. It has been widely demonstrated that

Physiognomy → Social perception

We can not say much about a person by looking at the facets of the face, but we formulate many of the social nature of a person simply by observing it, and the formulation of an impression has a lot of implications on the subsequent interaction.

Research by Sutherland and colleagues (Sutherland et al., 2015a, Sutherland et al., 2015b, Vernon, Sutherland et al., 2015, Sutherland et al., 2016) have shown that the face has a first significant impact on the interlocutor which values it - in terms of social perception - on many characteristics:

- Competence
- Sociability
- Leadership
- Intelligence
- Sexual orientation
- Reliability

These are perceptions of significant psychological areas of a person with significant impact on a person's assessment process. Indeed, it has been shown that such assessments, in most cases inaccurate, then lead to important decisions such as: preference for a candidate in a staff selection process, electoral choices, innocence / guilty assessments, probability To give a loan to a person.

Tabella. Accuracy of the Facial First Impression

| Facial First Impression | Accuracy |
|---|----------------------------------|
| Male IQ (Kleisner, Chvatalova, Flegr, 2014) | Moderate |
| Female IQ | Zero |
| Big Five Traits (Borkenau & Liebler, 1992; Little & Perrett, 2007; Pentonvoak et al., 2010) | E,C - Moderate N, O, A - Zero |
| Trust (Bonnenfon, Hopfensitz & De Neys, 2013; Efferson & Vogt, 2013; Rule et al., 2013). | Zero |
| Political Orientation (Rule & Ambady, 2010). | Moderate |
| Sex Orientation (Rule, Ambady & Hallett, 2009; Rule et al., 2011) | Moderate |
| Criminal Behavior (Bonnenfon et al., 2013; Efferson & Vogt, 2013; Rule et al., 2013). | Zero |

Table. Examples of decisions taken based on Facial First Impression (FFI)

| Predictor | Criterion |
|--|---|
| Trust (Lawson et al., 2010, Antonakis & Dalgas, 2009, Mattes & Milazzo, 2014), | Election Vote preferences |
| Similarity between voter and politician | Election vote preferences |
| Physical attractiveness (Gilmore, Beehr & Love, 1986; Hochschild & Borch, 2011; Lutz, 2010, Marlowe, Schneride, Nelson, 1996, Hosoda, Stone-Romero, Coats, 2003; Watkins, Johnston, 2000). | Hiring and firing decisions. Performance evaluation on the workplace. |
| Baby-face (Zebrowitz & McDonald, 1991) | Innocence/guilt decision in court |
| Face attractiveness (Duarte, Siegel & Young, 2012; Yang, 2014) | Chance to receive a loan |

Decisive choices are therefore based on inaccurate evaluations. In the selection process, the physiognomy of the face plays a decisive role in at least the following areas:

- Selection of the photo in the curriculum vitae
- Photo Selection in Social Profiles (Linkedin, Facebook)
- Face in the selection interview

There are many researches that have tried to demonstrate how certain variables can affect the evaluation process.

Some studies have shown what are the characteristics that impact most on social perception in terms of sociality, attractiveness and dominance, classifying them in the

following scheme

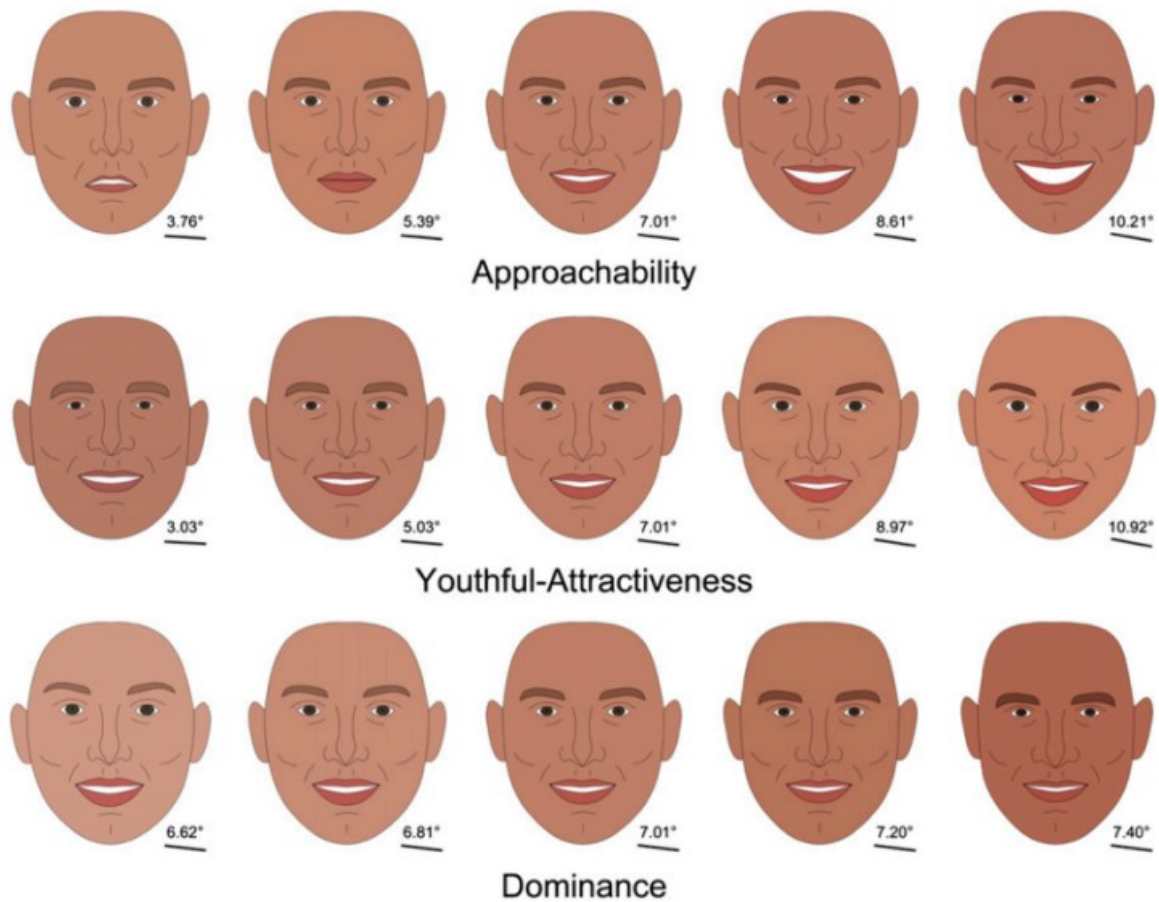


Table. Factors affecting on First Facial Impression

Table 1. Significant associations between objective attributes and social trait impressions in 1,000 ambient face photographs

| Attribute type | | Attribute | App | Yo-At | Dom |
|-----------------------|-----|-----------------------------|-------|-------|-------|
| Head size and posture | 01. | Head area | | 0.14 | |
| | 03. | Head width | 0.14 | 0.18 | −0.20 |
| | 04. | Orientation (front-profile) | | 0.12 | |
| | 05. | Orientation (up-down) | 0.17 | 0.28 | |
| | 06. | Head tilt | 0.19 | 0.20 | |
| Eyebrows | 07. | Eyebrow area | −0.16 | −0.21 | 0.23 |
| | 08. | Eyebrow height | −0.15 | −0.33 | 0.27 |
| | 09. | Eyebrow width | | 0.22 | −0.12 |
| | 10. | Eyebrow gradient | | 0.31 | −0.15 |
| Eyes | 11. | Eye area | −0.26 | 0.40 | −0.22 |
| | 12. | Iris area | −0.20 | 0.41 | −0.31 |
| | 13. | Eye height | −0.30 | 0.39 | −0.23 |
| | 14. | Eye width | −0.13 | 0.34 | −0.19 |
| | 15. | % Iris | −0.31 | 0.24 | |
| Nose | 16. | Nose area | 0.26 | 0.14 | |
| | 17. | Nose height | | 0.24 | |
| | 18. | Nose width | 0.45 | | 0.16 |
| | 19. | Nose curve | 0.37 | | |
| | 20. | Nose flare | −0.37 | | |
| Jawline | 21. | Jaw height | 0.17 | 0.35 | |
| | 22. | Jaw gradient | 0.18 | 0.33 | |
| | 23. | Jaw deviation | | 0.25 | 0.14 |
| | 24. | Chin curve | 0.18 | 0.31 | |
| Mouth | 25. | Mouth area | 0.69 | 0.14 | −0.15 |
| | 26. | Mouth height | 0.51 | 0.15 | −0.22 |
| | 27. | Top Lip height | −0.24 | 0.24 | −0.25 |
| | 28. | Bottom lip height | −0.35 | 0.34 | −0.15 |
| | 29. | Mouth width | 0.73 | | |
| | 30. | Mouth gap | 0.71 | | |
| | 31. | Top lip curve | 0.36 | 0.12 | |
| | 32. | Bottom lip curve | 0.75 | | |

| | | | | | |
|---------------------------|-----|----------------------------|-------|-------|-------|
| Other structural features | 33. | Noseline separation | 0.22 | | |
| | 34. | Cheekbone position | 0.16 | | |
| | 35. | Cheek gradient | | -0.17 | 0.37 |
| | 36. | Eye gradient | -0.23 | -0.21 | 0.32 |
| Feature positions | 38. | Eyebrows position | | | -0.27 |
| | 39. | Mouth position | 0.38 | -0.28 | |
| | 40. | Nose position | | -0.22 | |
| Feature spacing | 41. | Eye separation | | 0.23 | -0.21 |
| | 42. | Eyes-to-mouth distance | -0.39 | 0.19 | |
| | 43. | Eyes-to-eyebrows distance | | | -0.44 |
| | 46. | Mouth-to-chin distance | | -0.38 | 0.13 |
| Color and texture | 47. | Mouth-to-nose distance | -0.60 | -0.12 | |
| | 49. | Skin saturation | | | 0.28 |
| | 50. | Skin value (brightness) | -0.13 | | -0.23 |
| | 51. | Eyebrow hue | | | |
| | 52. | Eyebrow saturation | 0.13 | | 0.15 |
| | 53. | Eyebrow value (brightness) | | -0.13 | -0.22 |
| | 55. | Lip saturation | 0.12 | 0.19 | |
| | 59. | Iris value (brightness) | -0.24 | | |
| | 60. | Skin hue variation | | -0.21 | |
| | 61. | Skin saturation variation | | -0.22 | 0.21 |
| Other features | 62. | Skin value variation | | -0.24 | 0.25 |
| | 63. | Glasses | | -0.26 | |
| | 64. | Beard or moustache | | -0.20 | 0.24 |
| | 65. | Stubble | -0.15 | | 0.24 |

How to read this chart: App stands for Approachability, Yo-Att stands for Youthful- attractiveness, and Dom stands for Dominance. A positive number means a positive correlation, and a negative number means a negative correlation.)

Summing up the factors affecting traceability are to be analyzed in a person's mouth

- Mouth area
- Height of the mouth
- Mouth width
- Opening the mouth
- Lips corner curve

Factors affecting the attractiveness of the eye are:

- Eye area
- Iris area
- Eye height
- Width of eyes

The factors that affect dominance are:

- Height of eyebrows
- Gradient of cheekbones
- Eye gradient

- Skin saturation
- Change in skin value

These data are consistent with the previous search that sees the masculine traits as dominant aspects.

Factors Affecting Facial First Impression and Body Language of Photos

| Characteristic | Impact |
|--|---|
| Self-touching movements | Dominance (-) |
| High forehead | Competency (+) |
| Eyeglassess | Competency (+) |
| Not clear defined face-background contrast | Competency (-) Likability (-) Dominance (-) |
| No smile | Likability (-) |
| Eyes not visible | Likability (-) |
| Little dimension of the photo | Competency (-) Likability (-) Dominance (-) |
| No eye contact | Likability (-) |
| Zoom on a detail of the face | Likability (-) |
| Higher saturation | Competency (-) Dominance (-) |
| Higher contrast jaw-background | Competency (+) Likability (+) Dominance (+) |
| Full-body photo | Competency (-) Dominance (-) |
| Lower level of enlightenment | Piacevolezza (-) |

Methods to improve the perceived level of dominance

- Taking Power Pose (busting, erect and stable posture, not unbalanced on one side, showing hand back, head up, maintaining visual contact)
- Apply elegant clothing
- Place the camera under eye level
- Choose a professional and quality photo
- Use a photo in a business context

How to improve the perceived competence level

- Use visual contact
- Use a vertical posture

Impression Management

The candidate aims to show the best possible way, applying a whole set of impression management strategies (Vitale, Bafera, 2014), the company instead has the goal of selecting the person that most of all is fit to the chosen role. It can be assumed that the candidate can better manage impression management when it has precise indications of the meaning of the responses to a test. Here are some examples of impression management and how to neutralize them

1. The candidate may have instructions on how to handle non-verbal behavior (eg erect posture, maintain visual contact, avoid art closure, etc.).
2. The candidate can infer the meaning of a item and answer on the basis of social desirability or what it expects is desired by the company (eg, if a job seeker is looking for a flexible person, the subject will tend to To declare to be flexible when the personality test requires it. An item such as "fit me to different contexts and situations" makes explicit mention of flexibility,
3. The candidate can use ad elements or common places in self-presentation (in the selection interview and in group trials) eg, declaring "I consider myself a communicative, dynamic person willing to work in group and flexible. "

Making the items and the tests too transparent leads to less efficiency in the selection process. One of the ways to improve this assessment is the study of implicit indicators, indicators that are less mediated by conscious consciousness of the subject. Eg:

1. A candidate can set - by impression management - the position of the back erect or moved forward to demonstrate assertiveness or interest in the work position, but can hardly control all the micromovements of the shoulders (forward or backward, to communicate interest Or avoidance), which necessarily occurs during a selection interview.
2. You can prioritize the use of implied items. Implicit items also refer to the construct but not so explicitly and comprehensively. "I like to talk to people" is obviously an item related to extroversion, is a clear example of explicit item. There are, however, less clear and clear formulas in building a test. Very often, implicit measurement tools are more effective in measuring a construct because they act at a subconscious, indirect level. Implied measurement techniques are used in all cases where it is assumed that social desirability can play a decisive role (eg in the selection of staff). A classic example is the measurement of the constructions of racism (Maass, Castelli, Arcuri, 2005). Formulate openly discriminating items, activate the defenses of the evaluated person, who - to avoid being openly discriminatory - will avoid, giving us a false answer. Instead, construct implicit items such as "if I should interact with a homosexual person, I would try to make her understand that they are close to him, even if I have to pretend" she lowers the defenses of the evaluated because she acts at a hypothetical level, because she uses the word "if" Poses positive elements in the foreground "I would try to make her understand that I am close to her"
3. The free presentations of candidates should always be evaluated together with some questions of in-depth study. Common lice should be avoided in selection ads. If a candidate declares "flexible", the topic can be dealt with, for example, with questions such as "what do you mean by flexibility?", "Can you tell me a situation in your previous job where you have shown great flexibility?"

The most used impression management strategies at the verbal level are:

- Adulation (conjuring interpersonal attraction)
- Conformity of opinions (claim to have similar values and points of view to the interviewer)
- Verbal Tactics (Excuses)
- Self-promotion (positive affirmations on self)

Impression management strategies detect aspects that are not related to work, but only the extent to which people interact with the interviewer in order to convince him to be a good candidate. It does not matter to say only positive things on its own, it matters to do positive things. It is not important to determine whether an interviewer and an interviewee have common hobbies, this is completely irrelevant to the candidate's work quality. Yet, these strategies, when used, tend to determine better scores for the candidate and this results in a mistake.

Various research has shown that the structured interview - compared to the unstructured one - results in a reduction in the weight of impression management.

| | | Unstructured interview | Structured Interview |
|-------------------------------------|----------------------------------|------------------------|----------------------|
| IM impact on evaluator | Barrick, Shaffer & DeGrassi 2009 | .27 | .17 |
| Non verbal IM impact on interviewer | Barrick, Shaffer & DeGrassi 2009 | .40 | .30 |

A collection of studies conducted by Levashina et al. (2014) showed that there are IM strategies that weigh more on the final result

| Type of Impression Management | k | N | r | SDr |
|-------------------------------|----|------|-----|-----|
| Self-promotion | 13 | 2202 | .26 | .12 |
| IM focused on others | 12 | 2024 | .13 | .11 |
| Defensive IM | 12 | 2075 | .12 | .09 |
| Non Verbal IM | 7 | 1562 | .18 | .08 |

IM = impression management; K = number of studies, N = total sample size, R = weighted average observed correlation on the sample, SDr = average standard deviation on the sample

| Tipo di impression management | N | Mpbq | SDpbq | Msq | SDsq | d | 95% CI |
|-------------------------------------|-----------------|------|-------|------|------|------|-------------|
| Self-promotion | 467 | 2.93 | 1.90 | 1.99 | 1.46 | .48 | .01 a .95 |
| IM focused on others | 467 | 1.80 | 1.06 | 2.18 | 1.42 | -.27 | -.91 a .38 |
| Defensive IM | 467 | 1.63 | 1.16 | 1.30 | 0.68 | .46 | -.08 a 1.00 |
| Non Verbal (Peeters, Lievens, 2006) | Not significant | | | | | | |

N = total number of subjects, Mpbq = mean of the strategy on questions related to past behaviors; SDpbq = standard deviation in using the strategy with reference to past behavior questions; Msq = Strategy Medium on Situational Questions, SDsq = Strategy

Standard Deviation on Domino Domains, d = Size of Effect with Cohen Index, CI = 95% confidence interval

As you can see, using different questions leads to different impression management strategies. Questions about past behavior lead to a greater amount of self-promotion impression management strategies. This is due to the nature of questions that focus on the past behavior of the subject. Situational questions, however, lead to an increase in impression management strategies focused on other people. There are no significant differences in non-verbal strategies. This is because in most cases the candidate is referring to a list of general suggestions in the use of non-verbal communication, without adapting it as the interview develops.

Often, a person's personality is evaluated in the selection interviews. Some studies have tried to determine the correlations between the interviewer's ratings and those of the interviewee on their personality. In some cases the results were disappointing (correlations between .01 and .12 in Roth et al., 2005). In other cases, moderate and significant correlations were found (correlations between .30 and .42, in Barrick et al. 2000, correlations between .20 and .43 in the research of Van Iddekinge et al 2005)

New technologies

The use of social networking and other information on the web (Davison, Maraist, Hamilton, and others) has become more and more common with the development of technology. The video interviews used by the candidates are analyzed by evaluators (Brenner, Ortner, Fay, 2016) Bing, 2012).

The main studies on this subject have focused on these topics:

- Reliability of measures
- Quality of information obtained on web sources (eg social networks, video interviews, etc.)
- Legal aspects (eg privacy, usability of information)

According to Parvulescu and Vitale (2016), one of the main approaches to studying a subject's personality through web sources is the psycho-psychic approach that is born with Galton and is developed to date with modern computerized tools for automatic text analysis. There are several analytical tools that can draw users information, so it is plausible that they are used. The main areas of analysis of a facebook profile are:

- Analysis of the writer's personality
- Reduction of counter-productive behavior (CWB)

Studies about Verbal Communication Online

| | |
|--|----------------------|
| | Scientific Research |
| The extroverts have more images of themselves than the public encounters, the greater number of friends on social networks | Marcus et al. (2006) |

| | |
|--|--|
| People with experience openings have a greater amount of images related to trips to different nations, greater number of restaurant reviews | Gosling et al. (2002) |
| People who are self-evaluated as amicable, conscientious and emotionally stable publish fewer photos about sex themes, using alcohol and illegal drugs. | Karl et al. (2010) |
| People who are self-evaluated as amicable, conscientious and emotionally stable publish fewer photos about sex themes, using alcohol and illegal drugs. | Kluemper, Rosen (2009) |
| The theme of Impression Management is also present in computer-mediated communication. The issue of data collection in this case is to define who the subject is trying to create a positive impression. A student who wants to impress friends can use more negative behaviors than those who actually do (eg, do not go to school, report risk behaviors, participate in party Tsenova, 2016), a person who wants to impress companies can Exhibit more competency-related behaviors (show academic and educational achievements). The first one will be underestimated, the second will be overestimated. But in both cases impression management is being studied and less candidate itself. | Kuncel e Tellegen, 2009 Joinson, Kayany, 1998 Dominick, 1999 |

Davison, et al. (2012) give the following suggestions in using candidate screening over the Internet:

1. Develop regulations regarding the proper and inappropriate use of internet screening
2. Select the communication channel used for screening (social media, blog, e-mail communication) based on job analysis
3. Conducting a risk-benefit analysis to determine the legal risks of using internet screening to evaluate the candidate are superior to the potential benefits
4. Standardize screening ratings across the Internet and use multiple evaluations
5. Verify the accuracy of information obtained through screening over the Internet
6. Communicate the potential use of internet screening to valued subjects

Dark Personality

Dark personality is a construct designed by Paulhus and Williams (1970), consisting of narcissism, Machiavellianism and psychopathy, variables correlated with many negative outcomes. This section will summarize the results of the research in the field of work and selection.

Dark personality and interview techniques

| Research | Source |
|--|-------------------------------------|
| People with a high level of Machiavellianism tend to be less honest in interviews | Fletcher (1990) |
| Narcissists tend to use more impression management strategies such as self-promotion and loquacity | Paulhus, Westlake, Calvez, & Harms, |

| | |
|---|-------------------------------|
| Narcissists are better off to create good first impressions | Back, Schmulke & Egloff, 2010 |
| The good first impression tends to decrease in a short time, usually these people are beginning to be perceived as hostile and arrogant | Paulhus, 1998 |

Dark Personality and Leadership

| Research | Source |
|---|--|
| Narcissism is a key variable for understanding both successes and failures in leadership | Kets de Vries & Miller, 1985; Rosenthal & Pittinsky, 2006; Kernberg, 1999 |
| The trend towards risk behaviors is a variable considered positively in times of crisis | Johnson, Wrangham & Rosen, 2002 |
| The context determines the success or failure of leaders with dark personalities | Padilla, Hogan & Kaiser, 2007 |
| Pathological leaderships can facilitate organizational paranoia | Kernberg, 1999 |
| Machiavellianism is positively correlated to charisma and political performance | Deluga, 2001 |
| Narcissists tend to take extreme action that captures attention, which is why they tend to have a fluctuating performance characterized by great positive moments and great negative moments | Chatterjee, Hambrick, 2007; Resick, Whitman, Weingarden & Hiller, 2009 |
| There are correlations between dark personality traits and interpersonal relationship problems such as insensitivity, manipulation, demands, authoritarianism, social isolation, criticism, arrogance, melodrama, elusiveness, extreme caution, mistrust, eccentricity, passive resistance, perfectionism | Van Velsor & Leslie, 1995; Kernberg, 1999; Lombardo & McCauley, 1994; Dotlitch & Cairo, 2003 |
| Machiavellian managers have a greater level of supervisory abusive behavior against their subordinates | Kiazid et al., 2010 |
| The perceived lack of warmth, competence and morality of the leader are associated with counterproductive behavior of the staff | Vitale, Falvo, Capozza (2014) |

Dark personality, affect and attitudes

| Research | Source |
|--|---|
| Narcissistic sellers have a higher level of satisfaction than non-narcissistic sellers | Soyer, Rovenpor, Kopelman, 1999 |
| Machiavellianism, Narcissism and anger are all correlated negatively to satisfaction | Bruk-Lee, Khoury, Nixon, Goh, & Spector, 2009 |

Dark Personality and Negotiation

| Research | Source |
|---|----------------------|
| Machiavellians tend to be stronger in negotiation | Christie, Geis, 1970 |

| | |
|---|-----------------------------------|
| Narcissists tend to exacerbate the situation by abusing the relationship and creating antagonistic negotiations | Greenhalgh, Gilkey, 1997 |
| The dark personality generally correlates with the will to use illicit strategies | Wu, 2010 |
| Machiavellians tend to use more manipulation than others, Narcissists tend to use more charism and charisma while psychopaths use threats | Jonason, Slomski, & Partyka, 2012 |

Cultural Aspects

In the debate on culture and selection, Krause (2012) argues the need to strike a balance between the need for specific methods and techniques for a particular culture and selection methods and the need for standardization of any valid and useful processes For all cultures. In 2012 he conducted an exploratory study to analyze similar issues and differences in assessment center practices in South Africa, Western Europe and North America.

| Esercizi e simulazione | Sud Africa (N=43) | Europa Occidentale (N = 45) | Nord America (N = 52) |
|-------------------------|-------------------|-----------------------------|-----------------------|
| In-basket | 54 | 35 | 55 |
| Background interview | 51 | 92 | 58 |
| Situational Interview | 16 | 48 | 40 |
| Role-playing | 23 | 48 | 48 |
| Case study | 49 | 88 | 78 |
| Fact Finding | 26 | 78 | 38 |
| Planning Exercises | 16 | 20 | 33 |
| Sociometric instruments | 16 | 40 | 48 |
| Group discussions | 37 | 90 | 45 |

The lie in the personnel selection

Lying is a transversal theme in human communication. All of us, in fact, have a mental filter between what we think and what we are verbalizziamo that leads us to:

- Communicate what we think
- to omit a significant part of thought (omission)
- to distort it (transformation)
- to say the false (lie)

Lying sometimes also has a social function: it is put in place to not hurt our interlocutor.

In all situations where people have different goals, lies can come into play with a strategic function:

- get an advantage
- avoid punishment

Organizational contexts are rich in conditions where people can have different goals:

- Negotiations: Every negotiator wants - at least on the go - to get the most out of it, even at the expense of the counterpart
- Conflict management: this is the negotiation of resources that are perceived as scarce, with divergent opinions
- staff selection: the selector wants to have a great deal of information about the candidate in order to determine whether he is the right person, the candidate wants to appear as best as possible in order to maximize his chances of being chosen

This implies that the selection of staff is one of the conditions in which it is certainly possible to lie for strategic reasons (Castello & Vitale, 2012).

In order to talk about lies we need to talk about communication systems, which we summarize in this way:

- Verbal communication: the words spoken by the person
- Paraverbal communication: tone, timbre, rhythm, pauses, volume and all voice qualities
- Nonverbal communication: gestures, head orientation, body orientation, facial expressions, physical appearance, etc.

The presence of inconsistency between each of these systems can give a certain degree of dissimulation:

CV \neq CV

CV \neq CPV

CV \neq CNV

CNV \neq CNV

CPV \neq CNV

Each of the communication systems can thus be an indicative trace of lies. There are numerous lying recognition systems (Baratto, 2015). Lying recognition methods can be classified into:

- Physiological methods: methods that claim that lying is associated with significant physiological variations (Electrogastrogram, Polygraph, Functional Magnetic Resonance etc)
- Verbal Methods: Methods that say that during the lie and the dissimulation are more present some verbal indicators
- Nonverbal Methods: Methods that claim that lie is accompanied by significant variations in non-verbal behavior

Since physiological methods are rather invasive, they are not used in most European countries, although in others, such as Bulgaria, they are frequently used in many organizational contexts. Currently, in Bulgaria, the polygraph (physiological method) is used in these contexts:

- Evaluation of the candidate during a pre-employment interview
- An employee's loyalty rating
- Settlement of disputes

- Cases of civil and criminal relevance in an organizational context

Some physiological methods in stress assessment and management such as biofeedback and neurofeedback are rarely used in Italy for certain selections on high-level candidates (managers and athletes relevant)

For the vast majority of cases, selection conditions allow you to use both verbal and non-verbal methods during the interview. It should be noted, however, that for a careful and scientific analysis, the method of video analysis and standardized behavioral analysis methods (eg FACS, Ekman, Friesen, Hager, 2002; Dael, Mortillaro, Scherer, 2012) Although this implies higher time and economic costs. It is also advisable to apply the method only after a high level of inter-rater reliability has occurred. With regard to the FACS method, a FACS Final Test (FFT; www.paulekman.com) evaluation model is available,

Selection Interview

Of the interview methods, the structured interview is certainly the one that guarantees a higher level of reliability and validity. In fact, any level of de-structuring leads to different interviews on different subjects, and thus to produce unparalleled data between them. However, a minimum level of de-structuring may be necessary to ensure a minimum of flexibility in difficult cases to handle.

The structured interview can be defined as: "a personal and interactive process of one or more people who orally ask another person and evaluate their responses in order to determine the qualities of the person and to make a decision of employment in his / her Comparisons "(Levashina et al., 2014).

Among the proposed interviews, as can be seen from the scheme, the structured interview has an average level of validity and reliability higher than de-structured tools. However, there are several specific aspects to be analyzed in this tool: the reduction of evaluator bias, impression management, personality measurement, situational questions, and development of score scales.

Let's imagine that you have the following evaluation board to use during a structured interview. What I ask you is to evaluate what errors are within this selection card and then what could be greatly improved.

| Variable | 5 | 6 | 7 | 8 | 9 | 10 |
|-----------------|---|---|---|---|---|----|
| Physical aspect | | | | | | |
| Flexibility | | | | | | |
| Communication | | | | | | |
| Cooperation | | | | | | |
| Attention | | | | | | |

The first major mistake is the absence of a clear definition of measured features. If I do not have a coding manual in which I define exactly what I mean by physical presence, each evaluator will try to replace "physical appearance" with its physical appearance. We agree that this could mean very different things: clothing, personal hygiene, physical beauty. This variable can be greatly influenced by personal tastes, which have nothing to do with the

purpose of the interview. The same reasoning can be said of terms of flexibility, communication, collaboration, attention. These are terms that are so important as to be extensive and interpretable.

When producing a scoring card, it is always advisable to carefully define what is to be understood when it comes to a certain construct.

Some, in the face of this scheme, claim that scale 5 to 10 may be a mistake. In fact, this is not a formal error, the real mistake is to have no policy to define what is 5, 6, or 7 etc. If I do not have a criterion, the evaluation will be absolutely dependent on the subject.

To improve the effectiveness of this scheme, it is therefore necessary to:

- Define the constructs more carefully (for this see the appropriate paragraph)
- Define interpretive guidelines (scoring)
- Define scoring attribution models in the most unique and clear way possible

Guidelines

An example of guidelines for staff selection is reported by Zucchi (2007)

| Cognitive abilities | Observation elements for the conductor of the interview |
|----------------------------|--|
| Analysis | <ul style="list-style-type: none"> - Do you need many questions to gather the data and information you need? - Is he able to read quite complex and articulate situations? - Is it able to grasp the most important aspects of problems? - Do you have the taste and interest to go beyond the surface of this book by orienting yourself to understand the motivations and causes of problems? - Is he able to deepen the issues he deals with and return the complexity to the interviewee? - Is it accurate in the data it contains? - Are the interventions timely and centered? - Is there depth of reasoning or is it on the surface? - Do you use examples and specifications? |
| Syntesis/Overview analysis | <ul style="list-style-type: none"> - Can he/she focus on the most important aspects of problems or lose some particulars? - Can he/she connect variables and different aspects of problems? - How much does he/she go into detail at the expense of the whole? - Can he read a wide range of situations? - Is the communication register incisive and effective? - There is problem in dealing with the background and contextualization of the problem? - Is je able to self-operate "macro-micro" steps and vice versa with dealing with a problem? - Can the connections necessary to contextualize a problem maneuver in a paradigmatic and critical manner, and not just sequential? |
| Learning abilities | <ul style="list-style-type: none"> - Is he/she able to align with the communicative pace and the demands of the conductor? |

| | |
|--|--|
| | <ul style="list-style-type: none"> - What is your position on a precise feedback about its strengths, but especially its weaknesses? - - During the feedback, how much do you want to deepen by asking the evaluator specific about what he has been exposed to? - - How does he react to the stimuli of the interlocutor? What is the degree of reactivity? - - What is the real and active listening attitude towards the external environment and the interlocutor? - - What kind of critical processing does it make on successful experiences and failures occurring there? - - How much is he able to learn from mistakes rather than deny them? |
|--|--|

First competence: think analytically

Definition: Identifies the information to be analyzed and through applying logical reasoning skills comes to well-informed decisions

Features:

- Breaks the problems in their elementary aspects
- Identifies the information needed for the analysis
- Recognized in trend and property data
- Use quantitative and qualitative elements for analysis
- Demonstrate reasonably logical ability
- Makes decisions and proposes solutions even in the presence of somewhat ambiguous data

The behavioral interview

As we have seen, precise models are needed:

- formulation of applications
- standardization of the interview process
- Scoring (Scoring)

The behavioral interview is certainly one of the models that approaches a standardized process. It is a model that involves the use of concrete questions related to skills and behavior.

The behavioral interview assumes that one of the main predictors of future behavior is past behavior. Of course, people change and evolve, while many people's process of growth (work socialization, training, coaching, mentoring) can occur in the workplace and it will be responsible for doing this to the best and as personalized as possible for the new resource. But at the time of the interview, these data are available in part, what has happened is a more concrete one, taken into account by the behavioral interview model.

The behavioral interview can be seen as a toolbox that is composed from time to time based on the selected resource: there is no one behavioral interview, but there are many pieces of puzzle that can be composed.

The behavioral interview model is certainly the STARS method, derived from the English acronym:

- Situation
- Task
- Actions
- Results
- Summary

The study of a single subject's competence is put into practice through careful scrutiny of standardized questions focusing on the aspects listed: situation, task, actions, results, summaries.

Each role, based on job analysis and task analysis, suggests a certain model of skills. Features that the evaluator hopes to find in every good profile. Therefore, prior to the construction of the applications, it is necessary to define the reference skills. There are some basic rules for writing the definition of the competency correctly

- Competence must only refer to observable behaviors. A competency will not be able to distinguish valid and invalid candidates unless it includes behaviors that successful people practice;
- The behaviors envisaged must be those your colleagues agree to associate with effective performance, in this task it is important to confront with your work colleagues to design this list and not to do an individual job in this regard
- Every behavior must include a verbal phrase. In other words, you must describe an action that you may hear about during the interview, thus increasing the level of inter-rater trust.
- Good competence must cover at least four behaviors
- The expected behaviors of a junior team member will be different from those of the senior. As it is assumed that experience increases the level of competence
- Establish the preparation that a candidate must have in different roles. In particular, for candidates at basic level positions there will be lower levels of competence
- If time allows you to discuss with your colleagues. Do not rely solely on your evaluations, it is always preferable to know the opinions of colleagues well involved in the subject so that the features are not trivial but not too difficult to reach for the candidate (in both cases you would have too similar answers between subjects and therefore Unable to discriminate between the various levels of presence of the feature).
- List the behaviors that, according to the technical preparation requirements established, must be found in the candidate. This definition must be as clear as possible.
- Insist that interviewers only ask questions about those behaviors, so that they are no longer indulgent with some candidates and sterner than others. Any significant change from the interview model causes a problem of inequality in the procedures.

By way of example, there are some interview models for various features (Yeung, 2008)

Competence 1 - Think analytically

Definition: Identifies the information to be analyzed and through applying logical reasoning skills comes to good informed decision

Behaviors

- Breaks the problems in their elementary aspects
- Identifies the information needed for the analysis
- Recognizes trends and properties data
- Use quantitative and qualitative elements for analysis
- Demonstrate logical reasoning skills
- Makes decisions and proposes solutions even in the presence of somewhat ambiguous data

Table 1 - Analytical Thinking - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Describe a case in which you analyzed a problem When did it happen? How was that situation originated? |
| 2. | Tasks | Which task was assigned to you? |
| 3. | Actions | What data did you collect? In what way did you set the analysis of those data? What did you initially think of those data? What trends or properties did you recognize in that data? |
| 4. | Results | What were your recommendations? |
| 5. | Summary (if necessary) | So if I understand, you have ... |

Table 2 - Analytical Thinking - Funnel Question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Talk to me about the last time you analyzed the data When did it happen? |
| 2. | Tasks | Why did you try to analyze those data? |
| 3. | Actions | In what way has the analysis of those data been set? It makes me part of your mental process, in that circumstance What problems did you encounter in that analysis? How did you deal with them? Did you talk to any of those problems? Did you ask someone for advice? If so, who? What else did you do in analyzing those data? |
| 4. | Results | What were his final remarks? |
| 5. | Summary (if necessary) | In other words, to summarize what you did in that circumstance ... |

Competence 2 - Planning and Organizing

Definition: Defines the sequence of actions and resources required to achieve a given goal

Features:

- It manages its time
- Breaks complex goals into simpler tasks
- Decide when individual tasks need to be performed to achieve the ultimate goal
- Examine the resource needs
- It develops safeguard plans, to be ready to react in the event that problems arise

Table 3 - Planning and Organizing - Funnel Question: Example 1

| | | |
|----|------------------------|--|
| 1. | Situation | You are talking about a project (or a complex assignment) that she has planned from the beginning When did it happen? |
| 2. | Tasks | How did you manage to manage that project? |
| 3. | Actions | In what way has the planning and organization set? What resources did you need to accomplish the project? Did you need to involve someone in planning? If so, who? What else did she do to develop the plan of the project? |
| 4. | Results | What was the response to the success of that project? |
| 5. | Summary (if necessary) | Let's briefly summarize what happened: she has ... |

Table 4 - Planning and Organizing - Funnel Question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Describe to me a party or an event she has been in charge of planning and organizing How long have you organized it? |
| 2. | Tasks | Tell me a little bit about how yuo was assigned to arrange that event |
| 3. | Actions | What were your first steps? What problems did you encounter in that assignment? How did you deal with them? Which eventuality did you take into account in your plan? |
| 4. | Results | In the end, what was the success of that event? |
| 5. | Summary (if necessary) | I try to summarize what you did in that circumstance: you have ... |

Competence 3 - to demonstrate consistency and determination

Definition: persists in the face of obstacles and failures, motivating you to achieve results and to get facts

Behaviors

- Adjust your actions according to precise priorities, when time is short (eg decide what you can and what can not be done)
- Find ways to solve problems and overcome or overcome obstacles
- Takes initiative on purpose
- Persist in work, dedicating more time and effort to completing it properly
- Complete the tasks and assignments assigned to him by meeting the deadlines by keeping within the budget

| | | |
|----|------------------------|--|
| 1. | Situation | I'm talking about a project or work that was not done according to plans When did it happen? |
| 2. | Tasks | What was your role in that affair? |
| 3. | Actions | How did you deal with those difficulties? What else did not go in the right direction? And how did you handle that problem? Did you have to turn to someone to get help in that project? If so, who has it turned? What else did you do to straighten the situation? |
| 4. | Results | What was the final outcome of the project? |
| 5. | Summary (if necessary) | Let's see if I understood its description well: you have ... |

Table 6 - Demonstrate Constancy and Determination - Funnel Question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Please speak to me about a difficult project that you have been in charge of leading up to its completion When did it happen? |
| 2. | Tasks | How was she hired you? What was the difficulty of that project? |
| 3. | Actions | What problems have you encountered during the work? How did you deal with the first problem? How did he deal with the second problem? How did you deal with the next issue? |
| 4. | Results | What feedback then got to the project completed? |
| 5. | Summary (if necessary) | Let's recap: you have ... |

Fourth competence: to serve the customer

Definition: Striving to understand the needs of the customer strives to satisfy it extensively.

Behaviors:

- ask questions to understand the customer's needs;
- interprets body language to guess its unexpressed needs
- shows enthusiasm in interactions with the customer
- anticipates the client's needs to the other tasks of his / her work
- looks for ways to satisfy the customer even beyond his expectations

Table 7 - Serving the Customer - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Describe to me a case where you have satisfied a customer beyond her expectations When did it happen |
| 2. | Tasks | What did its contribution consist of? |
| 3. | Actions | How did you determine the needs of that customer? How did it meet those needs? What has exceeded the expectations of that customer? What customer did he react to his actions? |
| 4. | Results | How did you know you were able not only to match your customer's expectations, but even overcome them? |
| 5. | Summary (if necessary) | Based on what I just heard, it seems to me that she ... |

Table 8 - Serving the Customer - Funnel Question: Example 2

| | | |
|----|------------------------|---|
| 1. | Situation | Please tell me about a difficult client who you have to handle it When did that deal with that customer? How was this situation originated? |
| 2. | Tasks | What was that difficult for that customer? |
| 3. | Actions | What questions did you ask that customer to determine what his problem was? What alternatives did you consider to handle that customer? What steps does it take to manage the situation? How did that customer respond to his actions? |
| 4. | Results | In the end how the situation resolved? |
| 5. | Summary (if necessary) | Good. Now I try to summarize: you have ... |

Competence 5 - working in teams

Definition: It takes active part alt team by providing its contribution to what is needed to achieve the common goals

Behaviors:

- takes the initiative to see if other team members need assistance
- Provides psychological support and / or practical assistance to team members as needed
- Shares information and ideas with other team members
- In cases of conflict or poor communication in the team, he addresses the causes
- Adapt your role within the theme, as needed
- Extend to other team members the awards they receive for their performance and praise them whenever they are

Table 9 - Working in Teams - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Talk to me once when you have made a significant contribution to the achievement of a team's goal How long ago did it happen? |
| 2. | Tasks | What was he trying to achieve at that time on the team? What was its contribution? |
| 3. | Actions | Tell me by thread and sign, what did you say or what she did to help the team's efforts? What effect did you have on the team? |
| 4. | Results | What did the theme do in trying to achieve its goal? |
| 5. | Summary (if necessary) | To recap what she just told me, she has ... |

Table 10 - Teamwork - Funnel Question: Example 2

| | | |
|----|------------------------|---|
| 1. | Situation | You talked to me once when you helped a colleague How long ago did it happen? |
| 2. | Tasks | Why did that person need help? |
| 3. | Actions | What you did or said to help your fellow? How did this colleague react to his efforts? What else did you try to do [if necessary, repeat this question] |
| 4. | Results | With what result has the story ended |
| 5. | Summary (if necessary) | So you have ... |

Competence 6 - Learn and improve

Definition: actively solicits feedback from others and seeks opportunities to improve "

Behaviors:

- urges feedback and constructive criticism from others;
- identify and pursue learning opportunities
- learn in many ways, for example with reading, imitation of others, discussion, and so on
- Analyze errors to teach
- Modify its behavior based on what it has learned

Table 11 - Learn and Improve - Funnel Question: Example 1

| | | |
|----|-----------|---|
| 1. | Situation | You talk about the latest initiative you have put in place for your professional growth When did it happen? |
| 2. | Tasks | What was you proposing to get? |
| 3. | Actions | What initiatives did you take exactly? Did anyone else engage in his professional growth initiative? If so, who has involved? Can you describe the problems and difficulties you encountered in your professional development initiative? |

| | | |
|----|------------------------|--|
| | | How did you overcome those difficulties? |
| 4. | Results | What did he learn? |
| 5. | Summary (if necessary) | Good. Summing up, she has .. |

Table 12 - Learning and Improving - Funnel Question: Example 2

| | | |
|----|------------------------|---|
| 1. | Situation | You talk to me about the last time you've been criticized When did it happen? |
| 2. | Tasks | Please repeat exactly what that person said to you |
| 3. | Actions | Do you like answers to those words? What did he do after that criticism? What else did he do? |
| 4. | Results | Tell me how that episode has changed its behavior |
| 5. | Summary (if necessary) | In short, we can say that she has ... |

Seventh competence: to influence others

Definition: convince others to adopt a new point of view by resorting to logical arguments or other persuasion tactics

Behaviors:

- Identify the people who count on who to influence
- Ask questions to understand the needs and needs of the people they affect
- He remembers his intentions
- It fits its ways to conform to what the different situations require
- He can make his interlocutors happy
- Make the decisions and the resulting results consistent with the goals of the organization

Table 13 - Influencing Others - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Can you describe in detail the occasion in which you had to make change idea to someone When it happened |
| 2. | Tasks | Why was you trying to make that person change her mind? What was the initial conviction of that person? |
| 3. | Actions | What did you try to do? What did you say, or what did you do, exactly? What do the other respond to? You describe in detail what else you was trying to do, and how did the other react? |
| 4. | Results | What did she get in the end? |
| 5. | Summary (if necessary) | So if I understand you well ... |

Table 13 - Influencing Others - Funnel Question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Can you please describe a situation in which you faced someone with whom she did not agree at first Is it up to how long ago? What was the opinion of the other? |
| 2. | Tasks | What alternatives did you consider to address that situation? |
| 3. | Actions | Can you tell me with what method, on that occasion he tried to bring that person on his side How did that person react? What else you did to convince others? |
| 4. | Results | In the end, what happened? |
| 5. | Summary (if necessary) | To recap, you have ... |

Eighth competence: Think about running costs and revenues carefully

Definition: "Understands how important it is to manage budgets and costs, in pursuing greater efficiency and / or profitability

Behaviors:

- It proves to be cost-conscious and wasteful
- Finding opportunities to reduce costs and / or increase revenues
- Use financial analysis when they need it
- Make the cuts and adjustments needed to reach the balance in the budget forecast
- He is aware of the advantages and disadvantages of the various possible choices

Table 15 - Think and act carefully on costs and revenues - funnel question: example 1

| | | |
|----|------------------------|--|
| 1. | Situation | Can you talk about a difficult commercial project, to which you participated? When did it happen? |
| 2. | Tasks | What were the financial or commercial objectives of the project? Why was the situation difficult? What was your role in that project? |
| 3. | Actions | How did you try to intervene on the business or financial aspects of that project? What alternatives did you consider on that occasion? What did she do to deal with those difficulties? What else did he do? |
| 4. | Results | What happened in the end? |
| 5. | Summary (if necessary) | I try to summarize: she has ... |

Table 16 - Think and act carefully on costs and revenues - Funnel question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Can you talk to me about a financial decision you had to take? It's up to how long ago |
| 2. | Tasks | To what extent did you participate in that decision? Why was it a tough decision? |
| 3. | Actions | What analysis did he do to make that decision better Which alternatives you considered on that occasion What were the pros and cons of each alternative? Which alternative did you choose then? |
| 4. | Results | What was the effect of your decision? |
| 5. | Summary (if necessary) | To sum up what I seem to hear from her words, she has ... |

Ninth competence: to communicate with others

Definition: Produces clear and effective communications, in written form and in oral form, in formal situations and in informal situations

Behavior

- It compiles documents that clearly and concisely summarize the essential points of the subject matter
- Make yourself heard, and express your views for example in team meetings or in customer meetings
- Adapting the communication method to the hearing requirements (for example, knowing when talking to someone in private and talking to others in the presence of others)
- Perform formal formative presentations that it processes itself
- Finding feedback to verify the effectiveness of your communication

Table 17 - Communicating with Others - Funnel Question: Example 1

| | | |
|----|------------------------|--|
| 1. | Situation | Can you describe a case in which she had to give a difficult communication to an individual or a group? When did it happen? |
| 2. | Tasks | What was the message you was supposed to communicate? Because that message was difficult to communicate |
| 3. | Actions | What options did you consider to present your message? Which option then chose to convey your message Why did you just pick that option? How did the audience respond to your message? What else did she do on that occasion |
| 4. | Results | What feedback then received on the good outcome of his communication? |
| 5. | Summary (if necessary) | So to summarize she did |

Table 18 - Communicating with Others - Funnel Question: Example 2

| | | |
|----|------------------------|--|
| 1. | Situation | Can you describe a case in which you had to express a complex concept in a very short time How long ago did it happen? |
| 2. | Tasks | What did you try to express? Why was that concept so difficult to express? |
| 3. | Actions | How did you deal with the situation? Which tactic did you choose to convey your message? What else he did on that occasion |
| 4. | Results | How did you, then, understand that he was able to express that concept effectively? |
| 5. | Summary (if necessary) | So if I understand, she has ... |

Tenth competence: build relationships

Definition: Establishes the human relationship, seeks to understand the desires and needs of others and treats others with respect.

Behaviors:

- He met others enthusiastically (instead of waiting for the others to come to him)
- Ask others to determine what their desires and needs are
- Recognize diversity (cultural, national, organizational and so on)
- Seek to establish a common ground of understanding
- Treat others with respect

Table 19 - Build relationships - Funnel question: Example 1

| | | |
|----|------------------------|--|
| 1. | Situation | Describe a case in which you have made a relationship with someone When did it happen? |
| 2. | Tasks | For what reason was you interacting with that person? |
| 3. | Actions | How did you start building that relationship? Can you describe in detail all the steps she has made to build that relationship? What difficulties encountered on that occasion How did you manage to overcome those difficulties? |
| 4. | Results | In the end, what happened? |
| 5. | Summary (if necessary) | Now I recap: you have ... |

Table 20 - Building relationships - Funnel question: Example 2

| | | |
|----|-----------|--|
| 1. | Situation | Talk to me about the harder colleague with whom he had to deal When was that? |
| 2. | Tasks | Why did you have to build a relationship with that colleague? |
| 3. | Actions | How did you set up that relationship? |

| | | |
|----|------------------------|--|
| | | Tell me what else you did to build that relationship How did that colleague say that he was trying to build a relationship between you? What were the biggest difficulties you encountered on that occasion How could he overcome them? |
| 4. | Results | In the end, what kind of relationship did you build with that colleague? |
| 5. | Summary (if necessary) | So if I understand correctly... |

Eleventh competence: manage change

Definition: It is available to deal with change and not only looks for ways to favor it, but also strives to encourage and support others in promoting it

Behaviors:

- You did not want to change the circumstances (without recriminating or complaining)
- It raises questions that question traditional situations and concepts;
- Actively explore opportunities to change systems, processes, or work methods for the benefit of the organization
- Is to change with enthusiasm, instead of resisting; Encourages and supports others in promoting change

Table 21 - Managing Change - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Can you describe a recent opportunity in which you have changed a working method in your team or organization? When did it happen? |
| 2. | Tasks | Why did you think it would be appropriate to introduce that change? Who else needed to get that change? |
| 3. | Actions | What did he do to get that change? What problems or obstacles did you encountered in promoting that change? How did they overcome those obstacles? What other steps did you take to ensure the success of that change? |
| 4. | Results | What result did he get on that occasion? |
| 5. | Summary (if necessary) | Recapitulating you have |

Table 22 - Managing Change - Funnel Question: Example 2

| | | |
|----|-----------|---|
| 1. | Situation | You mentioned, for example, a situation in which you saw the opportunity to improve an inefficient work method When did it happen? |
| 2. | Tasks | How did you notice that opportunity? |

| | | |
|----|------------------------|--|
| 3. | Actions | How did you move to seize that opportunity? Going back to the beginning please describe the individual steps you have made to get the expected improvement What were the hardest times for her to try and make that improvement? What else did he do? |
| 4. | Results | What were the results of his efforts |
| 5. | Summary (if necessary) | Recapitulating you have |

Twelfth competence: to sell

Definition: Builds relationships with new customers and looks for ways to deepen them with old customers to sell products or services

Behaviors:

- Find and find opportunities to meet new customers (for example, using your personal relationships network, making cold calls, taking marketing initiatives, and taking other appropriate actions)
- Customizes its ways to those of the customer
- It is a participant in the needs of the customer
- Negotiate new business on favorable terms
- Make the customer happy with their purchases and look for ways to procure new business (grow existing relationships, make new contacts, and so on)

Table 23 - Sell - Funnel Question: Example 1

| | | |
|----|------------------------|---|
| 1. | Situation | Can you describe a case where she has persuaded a customer to buy from you? When did it happen? |
| 2. | Tasks | How did you know that customer? |
| 3. | Actions | How did you find out the wishes and needs of that customer? What were the concerns and needs of that client? She did what you did to match those concerns and those needs How did that person respond to the efforts you was doing? What tactics did you apply in order to negotiate a good deal for your organization? |
| 4. | Results | In the end, how much you was able to sell on that occasion |
| 5. | Summary (if necessary) | So recapitulating, you have ... |

Table 24 - Sell - Funnel Question: Example 2

| | | |
|----|-----------|--|
| 1. | Situation | Can you Describe an opportunity in which you has been busy with a client without having to finish the sale |
|----|-----------|--|

| | | |
|----|-------------------------|--|
| | | When did it happen? |
| 2. | Tasks | How did you know that customer? Why did not the customer finish the purchase at the end? |
| 3. | Actions | Can you describe the tactics she has applied to convince that customer How did the customer respond to the efforts she was doing? What else did he attempt in that circumstance? |
| 4. | Results | What did he learn from that customer? |
| 5. | Summary (se necessario) | So recapitulating, she has ... |

Competence 13 - to guide and inspire others

Definition: Provides clear instructions to team members and encourages them, inspires them and promotes their professional growth

Behaviors:

- Look at team members when drafting plans
- Provides address and guidance to team members
- Deliver with efficiency
- It transmits a sense of trust in others
- With coaching, encouragement and praise makes others more confident of themselves
- It counteracts poor performance by providing accurate and timely feedback

Table 25 - Guiding and Inspiring others - funnel question: example 1

| | | |
|----|-------------------------|--|
| 1. | Situation | Can you talk about an opportunity in which she has made coaches to one of your team members When did it happen? |
| 2. | Tasks | Why did you decide to be a coach for that person? |
| 3. | Actions | How did you deal with the subject for the first time? Starting with your initial discussion, tell me in detail or later steps How did the respondent respond to his efforts? In what other ways did you make coaches to that person and more generally how he promoted professional growth? |
| 4. | Results | What was that person then about? |
| 5. | Summary (se necessario) | To summarize, she has ... |

Table 26 - Driving and Inspiring Others - Question Funnel Question 2

| | | |
|----|-----------|--|
| 1. | Situation | Can you talke to me about a situation in which you had to motivate her team When did it happen? Tell me about your team shortly, to let me know the background |
|----|-----------|--|

| | | |
|----|-------------------------|---|
| 2. | Tasks | Why did the members of his team be motivated? |
| 3. | Actions | In what way did I address the task of motivating them? What steps did he do to motivate them? How did the team respond to their initial efforts? What did you do to motivate them? |
| 4. | Results | Based on what factual elements does it conclude that it has been able to motivate them? |
| 5. | Summary (se necessario) | If I understand what she has just told me, her ... |

Factors to be eliminated / restricted

- Negative Expressions: I do not know if you do not need it, do not think so;
- Expressions that contradict: this is not so, she is wrong, she is wrong, is not exact, impossible
- Predicative expressions: now I explain;
- Doubtful Expressions: I do not know if she can be interested in it, I would be, maybe she would like it;
- Faithful Expressions: You will see that you will find it good, if you do so will see that, it will definitely be interesting for you
- Appeal of trust: believe me, trust me, trust me, be quiet, I recommend it
- Cerimonial expressions: a person like her, as you know, do not want to disturb her, as she teaches me.

Use

- I understand perfectly his point of view
- It is preferable to consider the problem in a different way
- It's good to draw my attention on this point
- I agree with her and I add ...

Possible mistakes

- Questions yes / no (tend to be avoided). Rather, "talk to me ..."
- Because? Useful / useless (to be considered in relation to explored content). When the answer to any one because it is exploited by a deeper rationalization rationale, not even to the subject being examined, the question and answer expire in terms of usefulness (in this context, the question may have some usefulness in addressing what considerations, Reflections involves the candidate, but independently of a self-assessment capacity)

Mistakes

- What does he do in his spare time? You end up in a black hole, you go to touch topics that do not concern the job. They are also questions that address the use of heuristics that leave the time they find (eg if sport means it is flexible). Even worse is the binary question asking whether the candidate has preference for individual or group sports. Much better to do competency-based or behavioral questions like "Talk to me once that she has made a significant contribution to a team"

- Ask what the husband / wife thinks of his choices. They concern the candidate's private sphere.
- Ask about her husband's career? Private question, not inherent, and which presupposes greater importance of her husband's work

Provocative questions

Mistakes

- Ridiculous behavior
- To support too much visual contact
- Criticize the answers
- Stop abruptly

Error examples:

- With his lack of specific experience because he thinks we should assume it for this position?
- What would I answer if I told you she was the worst candidate I ever saw?
- Do you know how to handle stress? How much does 37 for 11?
- Does our work require great readiness? Do you see this pen? She mentions five good reasons for me to replace her with another

Transform into behavioral questions

- Please tell me about an opportunity in which you had to decide to give priority to certain activities, under the burden of events
- "You talked to me once and faced a loud situation
- Tell me about the most rude colleague or customer he was supposed to live with in the past year.

Pseudo psychological questions

- They are apparently introspective or psychological questions
- What does he do when he feels alone?
- Among the comic book characters, who would like to be, and why?
- What is the time of day you prefer and why?
- If you could have dinner with six historical characters, who would invite and why?

Hypothetical questions

- How could she feel if she missed her annual sales target?
- How would it be if two customers asked her for an appointment for the same time on the same day?
- How would the task of organizing a complex task be addressed?
- They are too open, the candidate guesses what needs to be answered.
- Transform into behavioral questions
- You talk to me about the last time you missed a target

- Describes a situation in which she had to juggle between two clients, with incompatible demands
- Talk to us when it came to organizing a particularly complex project

Tendering questions

Questions that suggest answers ...

- Time management is very important in this organizational position. Do you like it hollow in this?
- Are you sorry to work beyond regular time?
- Do you think it is important to work in time to achieve good results?
- Transform into behavioral questions
- Give me an example where you had to handle your time with method?
- When was the last time he had to work late or extraordinary? Talk to us
- He tells me when he was able to work in a team, working closely with his colleagues to achieve a certain result

Multiple Questions

She talked to me once that she exceeded her manager's expectations. Then tell me when it happened under what circumstances, what were the expectations of the manager how she was able to match her and what she learned from that experience.

Why did you choose that specialization at the university? To what extent do you think that studies have prepared for the work world? And what do you think you still need to learn? What are your intentions about enrolling in further graduate courses in the future?

Self-assessment questions

- What are your strengths?
- What are your weaknesses?
- On a scale of one to ten as it is considered capable of dealing with a crisis?
- How much are you able to manage staff?

Often, the most brilliant and positive answers come from candidates who delude their own skills. They measure how much the candidate is good at talking and not working.

Too general questions

- Tell me a little about yourself
- What's more proud of
- What regrets do you have?

It is difficult that such open questions actually lead to factual data and evaluation.

- Tell me about your current job (and only use this question to introduce additional questions specifically geared to the skills you are interested in)
- Which projects is most proud of, what she did in the last year? Then go to ask when it was, what the candidate did and so on, always with reference to a specific competence

- You're talking to me about a mistake she did in her job and how she handled it.
(This will provide you with factual evidence about how the candidate addresses his or her mistakes, if this is a major competence for the organization's position in question.

How to do questions on sensitive topics

| Topic | Not permitted | Permitted |
|------------------------------|--|--|
| General | What is her maiden name? Which social or political organizations are you enrolled in? | What's your complete name? Now tell me how he has exploited his network of personal relationships for the sake of his employer. |
| Family and relatives | Do you engage with someone? Does he live alone? What is your civil status? How is your partner called? What does your partner think of his job? Are you married, divorced, separated, cohabiting or single? Will you get married soon? How many people live with her? What does his father do (his mother)? How many brothers or sisters did they have? | How do you call your relatives who already work in this society? |
| Maternity and young children | Do you have small children? Do you think you have other children? What are his long-term, family-friendly? How does contraception work? How are your children called? What age do they have their children? How is it organized to look after its younger children? Who laughs at your little children while you are at work? Who could care for her little children if they suddenly get ill? | Do you think you will be absent for long periods in the future? If necessary, can it work beyond normal time? Can you work on Saturday or Sunday? Is it available to work in turn? Is there any reason to prevent you from starting to work on the morning in some days of the week? |

| | | |
|------------------------------|---|---|
| Ethnicity, race, nationality | <p>What is your mother tongue?</p> <p>Where's born?</p> <p>From which country is it?</p> <p>Where do your parents come from?</p> <p>Would you have trouble working with people of another race?</p> <p>Which language do you speak to your home?</p> | <p>Do you have a job permit?</p> <p>Which languages do you speak, read or write fluently?</p> |
| Age | <p>How old is he?</p> <p>When was it born?</p> <p>How many years have completed the studies?</p> <p>What is the age of your children?</p> <p>Would it be hard to work for a younger person than you did?</p> | <p>Are you adult?</p> |
| Religion | <p>Do you believe in God?</p> <p>What religious festivals celebrate?</p> <p>What does Sunday do?</p> <p>What is your religious confession?</p> <p>Which groups is a member outside of the work environment?</p> | <p>Does this job sometimes require work on either Saturday or Sunday? Does this create a problem for you?</p> |
| Sexual orientation | <p>What is your sexual orientation?</p> <p>Which social organizations does it belong to?</p> <p>Are you normal?</p> <p>Are you gay?</p> | <p>No question is admissible on this subject</p> |
| Health and Disability | <p>What are your health problems?</p> <p>How much does it weight?</p> <p>Do you have any disabilities?</p> <p>Do you have any handicap?</p> <p>What is the prognosis of your handicap?</p> <p>Have you ever been denied health insurance?</p> <p>When is the last time he has been with the doctor?</p> | <p>Are you able to fulfill the responsibilities that this task necessarily entails?</p> <p>Which special arrangements would it take to cover the job she was nominated for?</p> |

Predictive Validity



Perfect Predictions → 1.0

0.9

0.8

0.7

Assessment centres (0.68) →

Structured interview (0.62) →

0.6

Practical test (0.55) →

Attitudinal test(0.54) →

0.5

Biodata (0.40) → 0.4

Personality tests(0.38) →

Unstructured interview(0.31) →

0.3

0.2

References (0.13) →

0.1

Astrology (0.00) →

Graphology (0.00) → 0.0

Diffusion



Interview (100%) → 1.0

References →(96%)

Curriculum →(93%)

0.9

0.8

Attitudinal test (70%) →0.7

Personality test (64%) →

0.6

Assessment center (59%) →

0.5

0.4

0.3

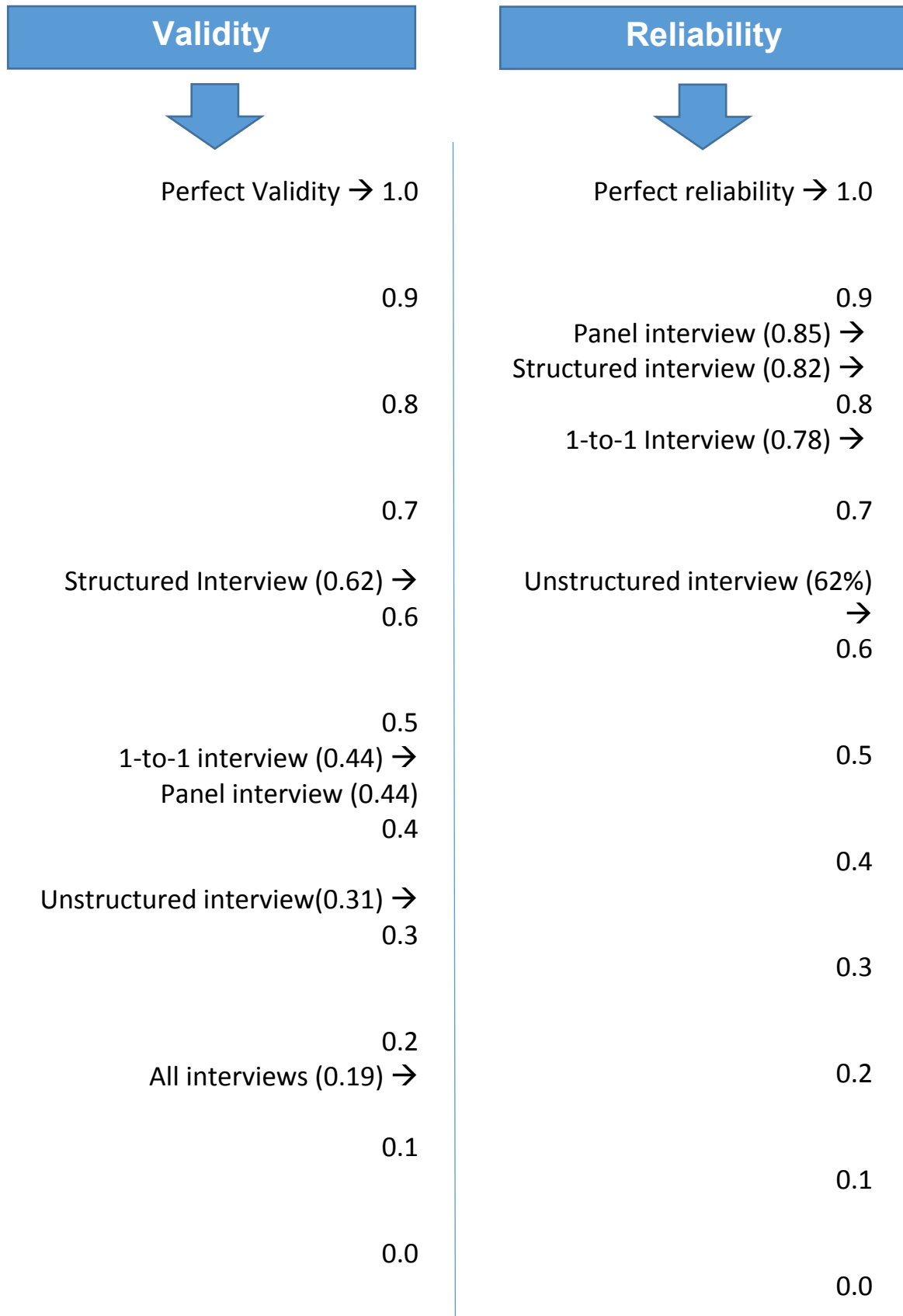
0.2

Biodata (19%) →

0.1

Graphology (2,6%) →

Astrology (0%) → 0.0



Tables of reliability and validity of Smith, 1986; Shackleton e Newell, 199; Anderson e Shackleton, 1993

Bibliography

- Anderson, N., Shackleton V. (1986). Recruitment and selection: a review of developments in the 1980's. *Personnel Review*, 15, 4, 19-26.
- Anolli, L., Legrenzi, P. (2006). *Psicologia Generale*. Bologna: Il Mulino.
- Back, M.D., Schmulke, S.C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism- popularity link at zero acquaintance. *Journal of Personality and Social Psychology*, 98, 132-145.
- Baratto, F.C. (2015). *Studi sulla menzogna: prospettive tradizionali, nuove prospettive neuroscientifiche e loro influenza sul Sistema giuridico*. Tesi di laurea specialistica, IUSVE Istituto Universitario Salesiano Venezia. Relatore: Prof. Marco Monzani. Correlatore esterno, Dr. Igor Vaslav Vitale.
- Barrick, M.R., Patton, G.K., Haughland, S.N. (2000). Accuracy of interviewer judgements of job applicant personality traits. *Personnel Psychology*, 53, 925-951.
- Barrick, M.R., Swider, B.W., Stewart, G.L. (2010). Initial evaluations in the interview: relationships with subsequent interviewer evaluations and employment offers. *Journal of Applied Psychology*, 95, 1163-1172
- Boncori, L. (2006). *I test in psicologia*. Bologna: Il Mulino.
- Brenner, F.S., Ortner, T.M., Fay, D. (2016). Asynchronous Video Interviewing as a New Technology in Personnel Selection: The Applicant's Point of View, in *Frontiers in Psychology*, vol. 7, art. 863, 1-11.
- Bonini, N., Del Missier, F., Rumiati, R. (2008). *Psicologia del giudizio e della decisione*. Bologna: Il Mulino.
- Brook-Lee, V., Khoury, H., Nixon, A., Goh, A., & Spector, P. (2009). Replicating and extending past personality/job satisfaction meta-analyses. *Human Performance*, 22, 156-189.
- Caki, N., Solmaz, B. (2013). The effects of facial beauty in personnel selection: a field work in retail sector, *Procedia – Social and Behavioral Sciences*, 84, 1203-1206.
- Campbell, D.T., Stanley, J.C. (1966). *Experimental and Quasi-Experimental Designs for Research*. Boston: Houghton Mifflin Company.
- Castello, A., Vitale, I.V. (2012). La menzogna nelle organizzazioni, in *Filodiretto: Federmanager* Bologna.
- Chatterjee, A., & Hambrick, D.C. (2007). It's all about me: narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52, 351-386.
- Chiorri, C. (2011). *Teoria e tecnica psicometrica. Costruire un test psicologico*. Milano: McGraw-Hill.

Christie, R., & Geis, F.L. (1970). *Studies in Machiavellianism*. New York, NY: Academic Press.

Davison, H.K., Maraist, C.C., Hamilton, R.H., Bing, M.N. (2012). To screen or not to screen? Using the Internet for Selection Decisions. *Employ Respons Rights Journal*, 24:1-21.

Dael, N., Mortillaro, M., & Scherer, K.R. (2012). The Body Action and Posture Coding System (BAP): Development and reliability. *Journal of Nonverbal Behavior*, 36, 97-121.

Dazzi, C., Pedrabissi, L. (2009). Graphology and personality an empirical study on validity of handwriting analysis. *Psychol Rep*, 105 (3 Pt2), 1255-68.

Deluga, R. (2001). American presidential Machiavellianism: implications for charismatic leadership and rated performance. *The Leadership Quarterly*, 12, 339-363.

Dominick, J.R., (1999). Who do you think you are? Personal home pages and self-presentation on the World Wide Web. *Journalism & Mass Communication Quarterly*, 76, 646-658.

Dotlitch, D. & Cairo, P. (2003). *Why CEOs fail: the 11 behaviors that can derail your climb to the top and how to manage them*. San Francisco, CA: Jossey-Bass.

Ekman, P., Friesen, W.V., Hager, J.C. (2002). *Facial Action Coding System (FACS): Manual*, Salt Lake City, USA: A Human Face.

Exner, J.E. (2003). *Rorschach: Compendio per il Sistema Comprensivo*. Milano: Franco Angeli.

Fazio, R.H. (1986). *How do attitudes guide behavior?* In *Handbook of motivation and cognition: foundation of social behavior*, a cura di R.M. Sorrentino e E.T. Higgins, New York: Guilford.

Fenigold, A. (1992). Good-looking people are not what we think, *Psychological Bulletin*, 111, pp. 223-228.

Fine, S. (2012). Estimating the economic impact of personnel selection tools on counterproductive work behaviors, in *Economic and Business Letters*, 1(4), 1-9.

Fletcher, C. (1990). The relationship between candidate personality, self-presentation strategies, and interviewer assessment in selection interviews: an empirical study. *Human Relations*, 43, 739-749.

Giambelluca, F.C., Parisi, S., Pes, P. (1995). *L'interpretazione psicoanalitica del Rorschach: modello dinamico strutturale*. Roma: Edizioni Kappa.

Gilmor, D.C., Beehr, T.A., & Love, K.G. (1986). Effects of applicant sex, applicant physical attractiveness, type of rater and

Gosling, S.D., Ko, S.K., Manarelli, T., & Morris, M.E. (2002). A room with cues personality judgments based on offices and bedrooms. *Journal of Personality and Social Psychology*, 8, 379-398.

Haynes, S. N., Richard, D.C.S., Kubany, E.S. (1995). Content Validity in Psychological Assessment: A functional approach to concepts and methods, in *Psychological Assessment*, vol. 7, no. 3, 238-247.

Hosoda, M., Stone-Romero, E. F., Coats, G. (2003). The effects of physical attractiveness on job-related outcomes: a meta-analysis of experimental studies. *Personnel Psychology*, vol. 56, n. 2, pp. 431-462.

Joinson, A. (1998). Causes and implications of disinhibited behavior on the Internet. In J. G.Ackenbach's (Ed.), *Psychology and the Internet: Intrapersonal, interpersonal, and transpersonal implications* (pp. 43-60). San Diego: Academic.

Jonason, P., SLomski, S., & Partyka, J. (2012). The Dark Triad at work: how toxic employees get their way. *Personality and Individual Differences*, 52, 449-453.

Karl, K., Peluchette, J., & Schlaegel, C. (2010). Who's posting Facebook faux pas? A cross-cultural examination of personality differences. *International Journal of Seleciont and Assessment*, 18, 174-186.

Kernberg, O. (1999). Le relazioni nei gruppi: Ideologia, conflitto e leadership. Milano: Raffaello Cortina.

Kets de Vries, M. & Miller, D. (1985). Narcissism and leadership: an object relations perspective. *Human Relations*, 38, 583-601.

Kiazid, K., Restubog, S., Zagenczyk, T. & Kiewitz, C. (2010). In pursuit of power: the role of authoritarian leadership in the relationship between supervisors' Machiavellianism and subordinates' perceptions of abusive supervisory behavior. *Journal of Research in Personality*, 44, 512-519.

Kline, P. (1993). *Manuale di Psicometria*. Roma: Astrolabio.

Kleisner, K., Chvátalová, V., & Flegr, J. (2014). Perceived intelligence is associated with measured intelligence in men but not women. *PLoS ONE*, 9(3), e81237.

Kluemper, D.H. & Rosen, P.A. (2006). Future employment selection methods: evaluating social networking web sites. *Journal of Managerial Psychology*, 24, 567-580.

Krause, D.E. (2012). Staffing and developing personnel using assessment centers: evidence from three continents, in *GSTF International Journal of Law and Social Sciences (JLSS)*, Vol. 2, No. 1, Dec 2012: pp-112-117.

Kuncel, N.R., & Tellegen, A. (2009): A conceptual and empirical reexamination of the measurement of the social desirability of items: implications for detecting desirable response style and scale development. *Personnel Psychology*, 62, 201-228.

Levashina, J., Hartwell, C.J., Morgeson, F.P., Campion, M.A. (2014). The structured employment interview: narrative and quantitative review of the research literature, *Personnel Psychology*, 67, 241-293.

Lombardo, M. & McCauley, C. (1994). *Benchmarks: A manual and trainer's guide*. Greensboro, NC: Center for Creative Leadership.

- Maass, A., Castelli, L., Arcuri, L. (2005). *Misurare il pregiudizio: tecniche implicite versus esplicite*, in Capozza, D., Brown, R. *Identità Sociale: orientamenti teorici e di ricerca*. Bologna: Pàtron.
- Marcus, B., Machilek, F. & Schutz, A. (2006). Personality in cyberspace: personal web sites as media for personality expressions and impressions. *Journal of Personality and Social Psychology*, 90, 1014-1031.
- Marlowe, C.M., Schneider, S.L., Nelson, C.E. (1996). Gender and attractiveness biases in hiring decision are more experienced managers less biased? *Journal of Applied Psychology*, vol. 81, n. 1, pp. 11-21.
- Marradi, A. (2007). *Metodologia delle scienze sociali*. Bologna: Il Mulino.
- Nunnally, J.C., Bernstein, I.H. (1994). *Psychometric Theory (3rd Ed.)*. New York: McGraw-Hill.
- O'Brien, K.S., Latner, J.D., Ebner, D., Hunter, J.A. (2013). Obesity discrimination: the role of physical appearance, personal ideology, and anti-fat prejudice. *International Journal of Obesity*, 37, 455-460.
- Peeters, H., Lievens, F. (2006). Verbal and nonverbal impression management tactics in behavior description and situational interviews. *International Journal of Selection and Assessment*, 14, 206-222.
- Paulhus, D.L. (1998). Interpersonale and intrapsychic adaptiveness of trait self-enhancement: a mixed blessing? *Journal of Personality and Social Psychology*, 74, 1197-1208.
- Paulhus, D., Westlake, B., Calvez, S., & Harms, P.D. (2012). Self-presentation success: a matter of self-promotion, not self-enhancement? *Journal of Applied Social Psychology*.
- Resick, C., Whitman, D., Weingarden, S. & Hiller, N. (2009): The bright-side and dark side of CEO personality: Examining core self-evaluations, narcissism, transformational leadership, and strategic influence. *Journal of Applied Psychology*, 94, 1365-1381.
- Rocchi, M.B.L. (2007). *Statistica e metodologia della ricerca per le discipline biometriche e psicocomportamentali*. Trieste: Edizioni Goliardiche.
- Roth, P.L., Van Iddekinge, C.H., Huffcutt, A.I., Eidson, C.E., Jr., Schmit, M.J. (2005). Personality saturation in structured interviews. *International Journal of Selection and Assessment*, 13, 261-273.
- Rosenthal, S.A., & Pittinsky, T.L. (2006). Narcissistic leadership. *The leadership Quarterly*, 17, 617-633.
- Rule, N.O., & Ambady, N. (2009). She's got the look: inferences from female chief executive officers' faces predict their success. *Sex Roles*, 61(9-10), 644-652.
- Rule, N.O., & Ambady, N. (2010). Democrats and Republicans can be differentiated from their faces. *PLoS ONE*, 5(1), e 8733.

- Rule, N.O., Ambady, N., Adams Jr, R.B., Ozono, H., Nakashima, S., Yoshikawa, S., Watabe, M. (2010). Polling the face: prediction and consensus across cultures. *Journal of Personality and Social Psychology*, 98(1), 1-15.
- Schneider, T.J. (2015). *Social networking sites and personnel selection: an initial validity assessment*, Thesis submitted in partial fulfillments of the requirements for the degree of Dotor of Philosophy in Industrial/Organizational Psychology.
- Shackleton, V.J. e Newell S. (1991). Management selection: a comparative survey of methods used in top British and French companies. *Journal of Occupational Psychology*, 64, 23-36.
- Smith, P. C. (1986). *Personnel Management*, Dicembre.
- Soyer, R., Rovenpor, J. & Kopelman, R. (1999). Narcissism and achievement motivation as related to three facets of the sales role: attraction, satisfaction, and performance. *Journal of Business and Psychology*, 14, 285-304.
- Sutherland, C.A.M. (2015). *First impressions from faces: integrating facial dimensions and social categories*, Doctor of Philosophy Thesis: University of York.
- Sutherland, C.A.M., Oldmeadow, J.A., Santos, I.M., Towler, J., Burt, D.M., Young, A.W. (2013). Social inferences from faces: ambient images generate a three-dimensional model, *Cognition*, 127, pp. 105-118.
- Sutherland, C.A.M., Rowley, L.E., Amoaku, U.T., Daguzan, E., Kidd-Rossiter, K.A., Maceviciute, U., Young, A.W. (2015). Personality Judgements from everyday images of faces, *Frontiers in Psychology*, vol. 6,
- Sutherland, C.A.M., Young, A.W., Rhodes, G. (2016). Facial first impressions from another angle: how social judgements are influenced by changeable and invariant facial properties. *British Journal of Psychology*,
- Tsenova, T. N. (2016). *Il comportamento a rischio in adolescenza*. Tesi di laurea non pubblicata, Università degli Studi dell'Aquila, a.a. 2015-2016.
- Ungaro, U., Borrelli, F. (2006). *Z-Test: Attualità ed importanza di un test proiettivo di facile uso*. Bari: Edizioni Marianna.
- Wade, J., Roth, P: (2015). Social media and personnel selection how does new technology change an old game, *Thirty Sixth International Conference on Information Systems, Fort Worth, 2015*, 1-21.
- Watkins, L. M., Johnston, K. (2000). Screening Job Applicants: the impact of physical attractiveness and application quality. *International Journal of Selection and Assessment*, vol. 8, n.2, pp. 76-84.
- Watzlawick, P., Beavin, J.H., Jackson, D.D. (1967). *Pragmatics of Human Communication: a study of interactional patterns, pathologies, and paradoxes*. New York: Norton & Co.
- Wu, J.Y. (2010). *Ethical and unethical negotiation tactic usage: Considering the role of aberrant personality*. Unpublished doctoral dissertation, Purdue University.

Wu, J., & LeBreton, J.M. (2011). Reconsidering the dispositional basis of counterproductive work behavior: The role of aberrant personality traits. *Personnel Psychology*, 64, 593-626.

Yeung, R. (2009). *Come intervistare e selezionare i candidati migliori*. Milano: Franco Angeli.

Van Iddekinge, C.H., Raymark, P.H., Roth, P.L. (2005). Assessing personality with a structured employment interview: Construct-related validity and susceptibility to response inflation. *Journal of Applied Psychology*, 90, 526-552.

Van Velsor, E., & Leslie, J.B. (1995). Why executives derail: Perspectives across time and cultures. *Academy of Management Executive*, 9, 62-72.

Vernon, R.J.W., Sutherland, C.A.M., Young, A.W., Hartley, T. (2014). Modeling first impressions from highly variable facial image, *PNAS*, vol. 111, n.32, pp. E3353-E3361.

Vitale, I.V. (2010). *Zulliger test: l'effetto del contesto*. Tesi di laurea triennale in Scienze Psicologiche del Lavoro, Università degli Studi di Urbino "Carlo Bo", Relatore: Prof. Lamberto Lambertucci, a.a. 2009/2010.

Vitale, I.V., Bafera, V. (2014). Il ruolo della prima impressione nella selezione del personale, in *FiloDiretto*: Federmanager Bologna.

Vitale, I.V., Falvo, R., Capozza, D. (2014). *Liderazgo, estilos de apego y clima organizacional en un hospítal de sur de Italia*. Paper presented at PSIFEX 2015 - La Facultad de Psicología de la Universidad Nacional Autónoma de México (UNAM).

Zammuner, V.L. (1998). *Tecniche dell'intervista e del questionario*. Bologna: Il Mulino.