
The Relations between Induced Emotions and Humor among Employees Working in HR Departments

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Abstract:

Purpose: Studies show that there is a relationship between induced emotions and humor style for HR employees.

Design/Methodology/Approach: In accordance with Martin's theory (2003) postulating the existence of five types of humor: affiliative, ego-serving, aggressive and depreciating, the HSQ questionnaire was used to check the type of humor among people belonging to groups in which one of the emotions had been previously induced: sadness, disgust, satisfaction and joy, and the control group. The independent variable was film presentations eliciting four types of emotions: disgust, sadness, satisfaction and joy. A total of 112 people were examined working in HR department.

Findings: The results obtained in this study show that inducing emotions such as joy or sadness are associated with a decrease or increase in the level of "affiliative" and aggressive humor. Experienced emotions can affect the way in which tasks are solved and, consequently, the results obtained.

Practical Implications: The results obtained may help in the selection of employees and personnel economy.

Originality/Value: First, the experienced emotions can affect the way in which tasks are solved and, consequently, the results obtained. Their influence is so strong that it may be related to changes in humor style.

Keywords: Emotions, humor, work.

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1. Introduction

Over the centuries, many thinkers have dealt with the issue of the sense of humor. They have tried to answer many questions such as: What is it? Where does it come from and, above all, what does humor mean to people. It is difficult to say which philosopher was the first to try to deal with the phenomenon of humor, but Aristotle was undoubtedly one of them. For him, humor appears in a situation (Tomczuk-Wasilewska, 2009, p. 22) "*while listening to a joke, a person makes up an ending in his head, but if the punch line turns out to be contradictory, the listener bursts out laughing*".

Probably the first scientific attempt to analyze humor, or rather the laughter that accompanies it, was made by Guillaume Benjamin Duchenne de Boulogne (1990). He noticed that laughter has two variants: spontaneous (called Duchenne), in which the zygomatic and orbicularis oculi muscles are tensed. Thanks to them, laughter seems sincere and natural. The second is pretend (called Pan Am), in which there is no tension in the orbicularis oculi muscles. This seemingly simple physiological division from more than a century and a half ago introduces an interesting approach to what makes us laugh.

As Gervais and Wilson (2005) note, the appearance of Duchenne laughter is an indicator of the appearance of emotions related to humor. This means that the changes flowing from our body are an indicator of what is funny and what is not. However, it was Patricia Keith-Spiegel (1972) who first tried to create and then extend the classification of what humor itself is. According to her, there are seven main categories. The first of them is the biological approach.

According to it, humor is an innate phenomenon. Two facts support this (Eibibl-Eibesfeldt, 1973): laughter appears already in early childhood and its occurrence is supracultural. Humor can also be understood in terms of play. Darwin (1965) already stated that humor is a tickling of the mind. Therefore, it is a connection between laughter and fun (Provina, 2000). It is possible that using the terminology of the aforementioned Aristotle or the unmentioned Hobbes (1840).

Humor is associated with a sudden surge of pride, related, among other things, to the fact that we see flaws or examples of ugliness in some seemingly noble state. There is also an approach that treats humor as a way of releasing tension. Herbert Spencer (1860) postulated that accumulated energy requires an outlet. And it is discharged by positive emotions and expressed through laughter.

The fifth group are theories of inconsistency. It also refers to Aristotle and directly to the quote cited earlier. Humor appears when an inconsistency appears, which is resolved (Suls, 1972). The penultimate group are theories that link humor with surprise. According to them, there is no possibility of humor without an element of surprise (Hurly, 2016).

The Keith-Spigel classification ends with theories based on Bergson's theory of humor. Bergson (1911) stated that rigidity in society is something suspicious, which is why humor is a kind of repair mechanism implementing more flexible action. Interestingly, according to Bergson, humor has an intellectual basis.

Currently, only a few groups of humor theories are being developed according to the Keith-Spigel classification (1972), which are, however, categorized differently than those previously cited. Psychodynamic and cognitive theories appear most often in studies.

The first group sees humor as masking repressed desires. This group includes, among others:

- Energy release theory - according to it, humor is a form of expression of suppressed and suddenly released energy (Freud, 1996).
- Dispositional theory – suggests the emergence of a sense of superiority towards the person being laughed at (Hobbes, 1954).

The second group, the Konivist theories suggest that humor is an intellectual phenomenon. This group includes:

- The inconsistency theory, very close to Aristotle's approach. Humor consists of two elements. The first one is related to expectations about the developing situation, while the second one is responsible for the perception of inconsistency in the initial prediction, which in consequence causes laughter (Raski, 1985).
- The theory of so-called "cognitive mastery" - a humorous stimulus is a kind of puzzle, the solution of which causes the appearance of pleasure (Forabosco, 1992).
- The tension relief theory – assumes that the appearance of illogicality causes an increase in motivation and tension. And the laughter that appears as a consequence is a reduction in tension (Berlyne, 1972).

It is worth mentioning that humor has a broader meaning. It can function in at least three areas, where it is difficult to set clear boundaries: comedy, humor and sense of humor (Martin, 2001). Comicality refers to objects or external situations that can elicit, for example, laughter. Other meanings are related to the experiences of an individual (Radomska, 2001).

Humor contains an emotional element and is strongly conditioned by the current psychophysical state of a person, in contrast to sense of humor, which theoretically should not be related to external factors (Tomczuk-Wasilewska, 2009). An interesting approach to the classification of humor was presented by Martin *et al.* (2003). According to him, there are four types of humor:

- Affiliative humor – is used to build and strengthen relationships with other people. It strengthens morality and a sense of unity while reducing conflict and tension. This humor manifests itself through telling funny stories or jokes.
- Humor in the service of the ego – serves to raise self-esteem, especially in difficult situations, when it allows to cope with stress, misfortune. This type of humor acts as a defense mechanism.
- Aggressive humor – it increases self-esteem, but at the expense of others. It manifests itself through the use of: sarcasm, mockery, or humiliation of others.
- Deprecating humor – manifests itself through establishing contacts with other people at the cost of ridiculing oneself. It is visible through excessive depreciation of oneself.

Regardless of the mechanisms that are the source of humor, humor itself is related to, among other things, the way we deal with stress (Abel, 2002), building relationships with other people (Kuiper, 1998), or self-esteem (Kuiper, 1993). Until recently, it was believed that a sense of humor is a trait, a fixed state of behavior, but recent studies show that it does not have to be this way (Hurlry, 2016). What may be related to a change in the sense of humor are emotions.

Emotions are something momentary and elusive. However, their appearance signals that something important from the human perspective has occurred. At the same time, they throw us off a certain state of equilibrium (Obuchowski, 1984). Emotions can be an impulse to act (Arnold, 1960), or a readiness for the activity itself (Frijda, 1986).

Interesting research by Isen (2005), which is a practical confirmation of Fredrickson's theory (2001), shows that positive emotions increase, among others: motivation to act, interpersonal and social skills. It is possible that they are related to a change in the style of humor. It is difficult to examine whether all emotions can have such a relationship and if it really exists.

However, it is possible to select four basic emotions (Ekman, 1992) with the opposite sign, strength and different content (Reykowski, 1974), disgust (strong and negative), sadness (weak and negative), joy (strong, positive) and satisfaction (weak, positive).

To sum up the theoretical considerations, the following specific questions can be asked:

- Will the induced emotions be related to changes in humor styles?
- Does gender differentiate styles of humor?

We suppose that:

H1: Induced emotions will be associated with changes in humor styles.

This hypothesis may be supported by Isen's research (2005) verifying the concept of *broadening mind and building personal resources* by Barbara Fredrickson (1998), according to this theory positive emotions affect human functioning in a different way than negative emotions and can change the way people perceive reality. The author's earlier research (Derbis Wirga, 2009) shows that induced emotions are related to a change in faith in man and a just world. As Tomczuk-Wasilewska (2009) writes, humor is strongly emotional and conditioned by a person's mental state.

Therefore, by inducing emotions, we can change the style of humor.

H2: Gender differentiates humor styles.

Some studies (Reiss, 2008) show that brain activity during watching funny stories is different depending on the sex. This is probably related to the activity of dopaminergic neurons related to the expectation and receipt of the reward of pleasure. Men, in contrast to women, had different expectations, which may be the reason for the differences in humor styles.

2. Materials and Methods

In order to answer the research questions and verify the hypotheses, a study was conducted, the aim of which was to analyze the relationship between the humor style and induced emotions. The study conducted three groups of statistical analyses. The first one concerned the relationship between the four induced emotions and the change in humor styles.

For this purpose, four detailed analyses were conducted (taking into account four emotions: disgust, sadness, satisfaction and joy, and the control group) for each of the four humor styles. The second group of analyses measured the relationship between gender and four humor styles. The last one was used to examine the relationship between independent variables and therefore log-linear analysis was used.

A total of 112 people were examined (66 men and 46 women, M age = 22.5 years) working in HR departments. They were divided into four research groups and one control group. In each of the four groups, one of four emotions was induced: disgust, sadness, satisfaction or joy. In the control group, no emotion was induced. Then, the humor style was measured in each group.

In the present study, the dependent variable was the indicator of humor style. For this purpose, the Humor Style Questionnaire (HSQ) by Martin, adapted from

Hornowska and Chrytonik (2011), was used.

The test consists of 32 questions. Each style of humor has 8 questions that the subjects answer on a 7-point scale, where 7 means that the subject strongly agrees with the statement and 1 means that they disagree with the formulation.

The independent variable was film presentations eliciting four types of emotions: disgust, sadness, satisfaction and joy. The effectiveness of these presentations was confirmed in the author's previous studies (Wirga, 2010; 2013)

3. Results

Three main statistical analyses were conducted. The first concerned the change in the style of affiliative humor depending on the type of induced emotions. Due to the nature of the dependent variable and the number of groups of non-merged variables, the analysis was performed using the ANOVA method, emotions (sadness, disgust, satisfaction, joy, lack of exposure inducing emotions) x number of points on the affiliative humor scale.

The analyses showed that the obtained results differ statistically [$F(4,112) = 26.247$; $p < .005$]. Additional *post-hoc analyses* (NIR test) showed that the induction of "joy" increases the level of "affiliative humor", while its level is reduced by the induction of "sadness". The second analysis was also performed using the *ANOVA method* in the scheme: emotions (sadness, disgust, satisfaction, joy, lack of exposure inducing emotions) x number of points on the aggressive humor scale.

Also in this case, statistically significant results were obtained [$F(4,112) = 19.13$; $p < .005$]. *Post-hoc analyses* (NIR test) showed that, similarly to the previous one, the induction of "joy" increased the level of "aggressive" humor, while the induction of "sadness" decreased its level. The third analysis, similarly to the previous ones, was performed using the *ANOVA method*: emotions (sadness, disgust, satisfaction, joy, lack of exposure inducing emotions) x number of points on the scale of "depreciating" humor. Also in this case, statistically significant results were obtained [$F(4,112) = 9.03$; $p < .05$].

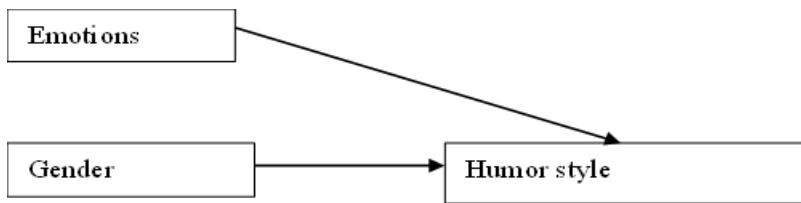
Additional *post-hoc analyses* (NIR test) showed that the induction of "sadness" increased the level of "depreciating" humor. The last analysis was also performed *ANOVA method* : emotions (sadness, disgust, satisfaction, joy, no emotion-inducing exposure) x number of points on the "ego-serving" humor scale did not show statistically significant differences.

The second group of analyses concerned the examination of whether gender differentiates humor styles. Four analyses were performed using the *t-student method* , which showed that women had a higher level of "affiliative" humor compared to men [$F(58)=3.535$; $p<.001$], while men had a higher level of

“aggressive” humor compared to women [$F(58)=5.286; p<.001$].

The last group of analyses was aimed at more precise relationships between the studied variables, which are of a qualitative nature; the log-linear method was used. Thanks to her the statistical significance of the effects of factors and their interactions can be tested. This method provides a more efficient way of looking at contingency tables. In the case of this study, the model is as shown in Figure 1.

Figure 1. Assumed causal diagram



Source: Author's calculations.

The dependent variable was dichotomized (Y) depending on the humor style. The significant independent variables can be presented as follows for each humor style (for the humor style: in the service of "ego" there were no statistically significant results):

Table 1. Significant independent variables for each humor style.

Humor style	Significant independent variables			
Affiliate	X ₁ - emotion: joy	X ₃ - emotion: sadness	-	X ₅ – Gender female
Aggressive	X ₁ - emotion: joy	X ₃ - emotion: sadness	X ₄ - Gender: male	-
Depreciating	-	X ₃ - emotion: sadness	-	-

Note: - no significance.

Source: Author's calculations.

In order to investigate the order of the interactions listed, all interactions were included in the models simultaneously. In this way, values of χ^2 were obtained which suggested the existence of interactions of at most second order. In order to assess which interactions exactly should be included in the log-linear model, partial and boundary tests were performed. Finally, significant interactions of partial and boundary conditions depending on humor styles are presented in Table 2.

Table 2. Factors and *p* -values of partial and marginal relationships depending on humor style.

Humor style	Factors and <i>p</i> - values of partial ¹ and marginal ² relationships							
Affiliate	Y (0.00) ¹ (0.00) ²	X1 (0.05) ¹ (0.05) ²	X3 (0.03) ¹ (0.03) ²	X5 (0.02) ¹ (0.02) ²	YX1 (0.02) ¹ (0.02) ²	YX3 (0.05) ¹ (0.05) ²	YX5 (0.02) ¹ (0.02) ²	X3X5 (0.03) ¹ (0.03) ²
Aggressive	Yes (0.00) ¹ (0.00) ²	X1 (0.00) ¹ (0.00) ²	X3 (0.04) ¹ (0.04) ²	X4 (0.02) ¹ (0.02) ²	YX1 (0.00) ¹ (0.00) ²	YX3 (0.02) ¹ (0.02) ²	YX4 (0.05) ¹ (0.05) ²	X1X (0.05) ¹ (0.05) ²
Depressed	Yes (0.00) ¹ (0.00) ²	X3 (0.00) ¹ (0.00) ²	YX3 (0.00) ¹ (0.00) ²					

Source: Author's calculations.

The estimated empirical models are well-adapted to the empirical data, as evidenced by the non-significant values of the χ^2 maximum likelihood statistic obtained. It is worth emphasizing that the dependent variable can also have second-order interactions for the following pairs of variables:

- Affiliative humor: sadness induction and gender: women
- Aggressive humor: joy induction and gender: male

4. Discussion

The conducted research partially confirmed the hypotheses. Inducing emotions is associated with a change in humor style, but only in some emotions and some styles. Joy is the emotion that causes an increase in the level of the “affiliative” and “aggressive” humor style. Sadness is the emotion that decreases the level of the “affiliative” and “aggressive” humor style, but also increases the “deprecating” humor. Joy, unlike sadness, is the emotion that causes unrealistic optimism and self-confidence (Stein and Jewett, 1986). That is why, in my opinion, changes in the level of these humor styles could have occurred.

Experiencing sadness occurs in a situation of failure to achieve a goal (Shaver, 1987), causes isolation, lack of self-confidence and focusing on internal factors (Stein, 1986), it is possible that this is why there was a change in the “derivative” style. The change in the level of humor style, compared to the control group, is not influenced by the induction of “satisfaction” and “disgust”.

The obtained results are consistent with those that appeared in the author's studies, in which emotions were induced and the belief in a just world was tested (Derbis and Wirga, 2009). The emotion of disgust, unlike joy and sadness, appears relatively rarely in interpersonal contacts, hence it is possible that it has a lesser impact on a one's functioning in the sphere concerning other people.

This mechanism was called by the author "conditioning alternation" and consists of the fact that not only situations marked by emotions evoke emotions, but emotions can also evoke images marked by emotions. A detailed description of this mechanism can be found in another publication by the author (Derbis and Wirga, 2009). It is difficult to explain, however, why "satisfaction" was not related to the change in humor styles. It is possible that emotion this is too weak to enable such a change.

The second group of analyses showed that gender differentiates humor styles. Men, unlike women, were characterized by a higher level of "aggressive" humor, while women, unlike men, were characterized by a higher level of "affiliative" humor. It is possible that for men, unlike women, it is more important, as Kazarian and Martin (2004) write, to gain and strengthen their social position at the expense of others, and the court also found a higher level of "aggressive" humor in men and "affiliative" humor in women.

The last group of log-linear analyses revealed that gender is the moderator between induced emotions and humor style. In women, the emotion of sadness is associated with an affiliative humor style, while in men, joy is associated with an aggressive humor style. Some studies show that the centers of positive and negative emotions are located in different hemispheres.

According to some researchers (Gainnotti, 2005; Narushima, 2003), people with damage to the left hemisphere experience negative emotions more often, cry more often, or show anxiety more often. In turn, damage to the right hemisphere results in greater problems in recognizing negative emotions (Bouhuys, 1999).

Additionally, some researchers (Hall, 2004; Bremer, 2001) believe that men use the right hemisphere of the brain more often in the emotional process, while women use both hemispheres, but with a predominance of the left hemisphere. It is possible that this is the reason for the differences in experiencing sadness and joy depending on the sex. However, when analyzing the results, two things must be remembered.

First, the humor styles were studied using a questionnaire method, not an experimental method. It is possible that if real behaviors were studied and not just declarations, the results could have been different. Even if this were the case, it is still interesting information from a methodological point of view.

It shows that experienced emotions can affect the way tasks are solved and, consequently, the results obtained. Second, these studies are not intended to create a taxonomy of the relationship between individual emotions and human behavior, but only to show that their experience affects how we function in the environment around us.

It is still an open question to examine the change in humor style in individuals, this

time measuring the style before and after the induction of emotions. Additionally, it seems interesting to check whether the induction of emotions changes only the "dominant" humor style or also the less "dominant" styles in a given person. However, the answer to these questions requires further research.

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