Eurasian Journal of Business and Management, 6(4), 2018, 44-58
DOI: 10.15604/ejbm.2018.06.04.005

EURASIAN JOURNAL OF BUSINESS AND MANAGEMENT

www.eurasianpublications.com

THE RELATIONSHIP BETWEEN HUMOR STYLES AND CREATIVITY: A RESEARCH ON ACADEMICS

Gulsah Kocak
Istanbul Commerce University, Turkey
Email: gulsah.kocak@istanbulticaret.edu.tr

Abstract

This study addresses how different styles of humor affect creativity and how innovation climate at the universities moderates this relationship. Questionnaire data were collected from 362 academics from various public and private universities in Turkey. Correlation, an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) utilizing structural equation modelling and hierarchical regression analysis were used to test the hypotheses. As suggested in the hypotheses, it is found out that while self-enhancing and affiliative humor are positively related to academics' creativity, aggressive humor is negatively related to academics' creativity. However, self-defeating humor is not significantly related to creativity as argued and innovation climate partially moderates the relationship between humor styles and creativity. The findings suggest important managerial implications on how to make use of humor styles to boost creativity and overall organizational effectiveness.

Keywords: Humor, Humor Styles, Creativity, Innovation Climate

1. Introduction

In today's continuously changing business dynamics, it is vital for the organizations to look for new ways of doing things in order to achieve competitive advantage. This idea definitely reinforces the importance of creativity i.e. the importance of creative thinking and performing at workplace. Creativity offers organizations the opportunity to cope with constant change as well as the opportunity to take advantage of it. Therefore, every organization that has the claim to survive and succeed has to learn how to develop and sustain creativity skillset of their employees.

Creativity could be identified as a practice that results in novelty which is regarded as beneficial, rational or fulfilling by a group of people at a given time (Stein, 1953). Likewise, Amabile (1983) argued that a product or service is creative only if it is accepted as novel and useful by appropriate audience. Similarly, George (2008) claimed that for ideas and solutions to be accepted creative in an organization, they must be both new and valuable for the organization. To foster these views, it could be concluded that creativity is a process of communication which provides the organization with an important competitive advantage and contributes to the final outcome.

According to Kasof (1999), creativity is something perceived new and useful by someone other than its creator. Conversely, Runco (1998) and Baer (1997) acknowledged

creativity to be anything somehow original and applicable for the creator. Furthermore, Csikszentmihalyi (1991) put forth that creativity can neither be found in the creator nor the products but rather in the reciprocal action between the creator and the audience who keeps or turns down the said products. In short, creativity can be defined as a contingent and intuitive perception of the novelty and value of a consequence of an individual's, group's or organization's conduct.

Contrary to the conventional psychological approach which derives from the personal characteristics of the individual, Amabile (1996) stressed that social environment has a direct effect on both the dimension and the frequency of the creative behavior. So, they conceptualized creativity as development of new and useful ideas in a particular context and innovation as the execution of these new and useful ideas in that particular context (Amabile 1996). Though creativity appears to be a prerequisite for innovation, it is not adequate by itself alone and creative ideas can be obtained externally when required.

In a study on organizational creativity and innovation, Amabile (1988) asserted the following three factors each of which has a different sub dimension: 'organizational innovation motivation'; 'resources' and 'management practices'. While organizational innovation motivation could be related to innovation tendency and all types of creativity and innovation support inside the organization, resources could be everything the organization has which helps innovation, and management practices could be related to management initiatives such as freedom and autonomy provided, objectives set and work groups formed including individuals with different skillsets and views (Amabile, 1988). KEYS Creativity Model developed by Amabile (1996) is based on this contextual theory proposed by Amabile (1988). Being the most frequently used creativity model in the business world today, KEYS Model has five dimensions: 'encouragement of creativity'; 'freedom/autonomy'; 'resources'; 'pressures' and 'organizational impediment to creativity'.

Originating from 'openness to experience' and 'conscientiousness' dimensions of the Five-Factor Personality Model, which is commonly used in personality and organizational behavior studies, George and Zhou (2001) adopted an interactional approach and designed Interactional Creativity Model at Workplace, focusing primarily on to what extent these two dimensions have an impact on creativity. When George and Zhou (2001) looked over under which organizational conditions 'openness to experience' contributes to the formation of the creative behavior, they discovered the following four sub-dimensions: 'feedback valence', 'unclear ends', 'unclear means' and 'multiple means'. Likewise, when they investigated under which conditions 'conscientiousness' has a negative impact on creativity, they found 'close monitoring', 'inaccurate communication', 'unhelpful coworkers' and 'negative work environment'. Then, they added 'creative behavior' dimension and came up with Interactional Creativity Model at Workplace which consists of eleven dimensions.

Rice (2006) concentrated on individual values and creative behavior and defined employee creative behavior as the self-perception of an employee regarding her/his creative behaviors at workplace. Pointing out that individual creative behavior is nurtured more by intrinsic motivation; Rice (2006) emphasized the importance of the relationship between the organizational context and employee creative behavior and created Employee Creative Behavior Model to measure individual creativity perception at one dimension (Rice, 2006). In addition, one of the leading creativity model in management and organization research pertains to DiLiello and Houghton (2008) who asserted that individual creativity has two facets: 'practised creativity' and 'creative potential'. Claiming that 'creative potential' is what the individual can do and 'creativity practised' is the opportunity realized to use individual's creative capability and skills and they built Creative Potential and Practised Creativity Model (CPPC-17). According to DiLiello and Houghton (2008), in order to transform the creative potential into practised creativity, not only individuals should reinforce their creative capabilities, but also organizations should enhance the contextual elements that will facilitate fostering creativity in the organization.

On the other hand, humor is a complex but strong tool of communication at workplace. As Orwell (1968, p. 284) pointed out, "Each joke is a tiny revolution." Humor maintains trust, increases morale and satisfaction, decreases stress and boosts approachability, develops

relationships, contributes to flexibility in the organization. When employees at workplace are in a relaxing and happy mode, they tend to produce more; particularly they tend to bring forth novel ideas and suggestions for new projects and/or plans which will add value to the organizational performance. Although most of the studies tend to focus on the benefits of humor in the workplace, there are also studies on the drawbacks of humor i.e. dark side of the humor.

Martineau (1972, p. 114) defined humor as "any communicative instance which is perceived as humorous"; Crawford (1994, p. 57) saw humor as a communication approach "which produces a positive cognitive or affective response from listeners"; Lynch (2002, p. 423) stated that "humor is fundamentally a communicative activity"; Romero and Crutthirds (2006, p. 59) described humor as "amusing communications that produce positive emotions and cognitions in the individual, group or organization"; whereas Robert and Yan (2007, p. 209) explained humor as "an intentional form of social communication delivered by a producer toward an audience". Among all these definitions, Robert and Yan (2007) have the most acceptable one since humor not only leads to positive outcomes but also to negatives.

Moreover, there are many different definitions of sense of humor which vary from explaining sense of humor as a social skill (Goodman, 1983); a coping strategy or defense mechanism (Lefcourt and Martin, 1986); an interpersonal communication behavior (Sherman, 1988); a cognitive ability or process (Feingold and Mazzella, 1993); a perspective or attitude about life (Svebak, 1996) and finally as most of the humor scholars suggested, as an attribute which enables a person to acknowledge and use humor as a coping mechanism and/or to foster social and affiliative communications within a group. (Lynch, 2002; Martin *et al.* 2003).

Since humor can be quantified in numerous ways due to its multidimensionality, researchers came up with different approaches on humor and sense of humor studies. Eysenck (1972) stated that sense of humor can be identified under three dimensions as 'conformist sense', referring to the level that a person finds similarity in other people's humor appreciation; 'quantitative sense', addressing the frequency that a person smiles or laughs and/or how often s/he is amused and 'productive sense', mentioning the degree that a person amuses other people. Sense of Humor Questionnaire developed by Svebak (1974) focused on the following three perspectives on sense of humor: 'sensitivity to humor' which can be described as capacity to see the humorous act; 'attitudes towards humor' which can be stated as how a person appreciates humor in her/his life and 'expression of humor' which can be noted as the skill to develop and communicate humor. Due to the low reliability scores, Svebak (1996) excluded the expressiveness items in his scale and further developed Sense of Humor Questionnaire 6, in which he concentrated on sensitivity and appreciation aspects.

Bizi *et al.* (1988) distinguished humor as 'productive' and 'reactive', the first addressing the production of humor and laughter and the latter addressing the act in response to the humor of others with a smile or laughter. They further put forth two more humor styles as 'self-directed' and 'other-directed' humor according to the focus of the humor. Self-directed humor includes laughing at oneself and making fun of oneself whereas other-directed humor includes being sarcastic and making fun of others. According to Thorson and Powell (1993), there are four main scopes in which humor can be conceptualized. In their Multidimensional Sense of Humor Scale, they proposed the following dimensions of humor: 'the ability to generate humor, to have a sense of joking'; 'the ability to use humor as a coping mechanism in dealing with problems'; 'the ability to appreciate humor and humorous people' and 'the attitudes towards humor'.

Kuiper and Nicholl (2014) divided sense of humor according to 'humor appreciation' and 'humor generation' and then further differentiated the styles of humor as 'adaptive', including affiliative and self-enhancing humor and 'maladaptive', referring to aggressive and self-defeating humor. Regarding Humor Climate Questionnaire built by Blanchard *et al.* (2014), four aspects of humor were suggested: 'positive in-group humor', humor produced to support team spirit and morale in the group; 'negative in-group humor', humor used to ridicule and demean others in the group; 'negative out-group humor', degrading sarcastic humor targeting outside of the group, mostly management or authority and 'supervisor support for humor', degree that the leader of the group favors and fosters humor in the group. The main idea of Humor Climate Questionnaire is to measure the extent and way employees express and experience humor in the workplace.

Furthermore, organizational climate can be interpreted as the common perception of the employees on organizational characteristics in a particular organizational environment (Ehrhart *et al.* 2013). Literature suggests that there is a linkage between creativity and innovation climate (Pundt, 2015; Scott and Bruce, 1994; Yu *et al.* 2013), as well as humor and innovation climate (Ekvall, 1996; Slatten *et al.* 2011). Likewise, while this study proposes a theoretical framework on how different styles of humor affect creativity and how innovation climate in the universities moderates this relationship, it also aims to offer some practical managerial implications on how different types of humor may be used to foster creativity at workplace. The study contributes to the literature by extending the previous research in that different humor styles have different impacts on individual creativity.

2. Humor and Creativity

Humor has many positive effects on organizational behavior (Cooper, 2005). Humor contributes to organizational outcomes and effectiveness by decreasing stress, work withdrawal, absenteeism and job burnout and by increasing health, job satisfaction, group cohesion and leadership performance (Mesmer-Magnus *et al.* 2012). Besides, humor also has negative correlation with stress (Kuiper *et al.* 1992), emotional exhaustion (Tumkaya, 2007), low leadership performance (Wood *et al.* 2007) and job burnout (Malinowski, 2013). However, there is also dark side of humor and unlike positive humor; these types of humor are negatively associated with organizational performance (Martin *et al.* 2003).

As humor has both positive and negative effects, researchers divided humor into two groups as adaptive and maladaptive type of humor. While analyzing the conceptualizations of humor, Martin *et al.* (2003) developed Humor Styles Model which includes both aspects of humor. They suggested that humor is a multidimensional trait which can be examined according to its focus, whether humor is used to enhance the self (intra-psychic) or to enhance relationship with others (interpersonal/social); its nature, whether humor is positive/beneficial or negative/detrimental to self and/or relationships (Martin *et al.* 2003). Adaptive types of humor are either ‘self-enhancing humor’ that is used as a coping mechanism to ensure a positive vision on life or ‘affiliative humor’ that is used to amuse others, reduce tensions in a group and enhance relationships. On the other hand, maladaptive forms of humor are either ‘self-defeating humor’ that aims to comfort and amuse others by satirizing oneself or ‘aggressive humor’ that aims to criticize, manipulate and threaten others (Martin *et al.* 2003).

Furthermore, there are three main theories used to explain the functions of humor: relief theory, incongruity theory and superiority theory. Developed by Freud (1928), relief theory asserts that people engage in humor and demonstrate laughter in order to relieve physiological or psychological tension (Kuiper *et al.* 1992). Consequently, when people manifest humorous acts, they tend to feel a sense of relief and pleasure. Incongruity theory traces back to Kant (2007, p. 336) who associated ‘incongruity’ with ‘frustrated expectation’ and highlighted that laughter arises “from the sudden transformation of a strained expectation into nothing”. According to incongruity theory, humor can be found in an experience which is surprising, extraordinary, unexpected and somewhat violates the regular norms. Humor can also be described as the people’s expression of superiority than other people. Superiority theory suggests that people laugh at certain situations or jokes because they make them feel superior to other people. This theory rather pinpoints the dark side of humor including the maladaptive types of humor.

In the meta-analysis by Appu *et al.* (2015), it is asserted that creativity at workplace is the art of ‘a good employer’ rather than ‘a good employee’ and that the antecedents of creativity at workplace could be grouped into two as individual and organizational factors. They also emphasized that individual factors like self-efficacy, cognitive style, autonomy and motivation have also a direct influence on the development of the employee creative performance. However, it is crucial that organizational factors, particularly supervisor and coworker support must be provided to realize creative performance (Appu *et al.* 2015).

As theorized in the literature, there is a connection between humor and creativity at individual level (Holmes, 2007; Lang and Lee, 2010; Miller, 1996; Slatten *et al.* 2011). Humor

nurtures relationships and provokes creative intellectual activity in an organization (Holmes, 2007). According to the research by Lang and Lee (2010), liberating humor has positive correlation with creativity while controlling humor has negative correlation with creativity. However, stress-relieving humor has no significant effect on creativity (Lang and Lee, 2010). As it can be inferred from their names, these forms of humor were classified in relation to the roles they pertain. Liberating humor addresses freeing of the mentality and perceiving the world in a different way, whereas controlling humor is mainly the guidance and direction (punishments, rewards, etc.) used to ensure control over others. Stress-relieving humor refers to humor that decreases tension and maintains relaxation.

Since liberating humor encourages employees to open their minds and seek for novel ways of doing things in a highly relaxed and flexible environment, it increases the possibility of new experiences and paves the way for original ideas and creative projects. Subsequently, stress-relieving humor can also be suggested to serve to creativity when it forms a base of stress-free workplace which can be a solid ground for creativity. On the contrary, controlling humor operates as a statement of criticism, deprecation, irony and sarcasm, which lead to a background full of negative feelings, doubt and ill will. Therefore, it is generally negatively associated with creativity (Lang and Lee, 2010). Miller (1996) highlighted humor as an integral factor and argued that humor reduces stress, develops interpersonal skills, fosters learning and enhances creativity. However, Miller (1996) mentioned that not all types of humor are acceptable, referring to the maladaptive forms of humor. Slatten *et al.* (2011) also stated that organizations should refrain from negative humorous climate and aim to encourage the development of positive humorous organizational climate.

As stated in the relief theory of humor, humor could be associated with creativity as laughter will trigger the free 'flow of ideas' (Ziv, 1976) and which would in turn, support the 'idea generation' process of creativity. Referring to the incongruity theory of Kant (2007), Martin (2007) acknowledged incongruity as a cognitive element of humor. Similarly, incongruity theory of humor emphasizes that humor is an act that is 'surprising' and 'extraordinary' which brings about the 'novelty' and 'originality' aspect of creativity. Likewise, Holmes (2007) affirmed that incongruity of humor arouses exceptional ways of thinking which generates original combinations that result in new idea creation. Moreover, broaden-and-build theory of Fredrickson (2001) states that there is an interconnection between an individual's positive emotional state and creativity as positive emotions can lead a person to creativity by broadening her/his way of thinking (Fredrickson, 2003).

Following the above discussions and these three theories, it could be concluded that humor contributes to creativity. Therefore, we hypothesized that there is a significant relationship between humor styles and creativity. We proposed that while there is a positive relationship between positive forms of humor and creativity, there is a negative relationship between negative forms of humor and creativity:

H_1: There is a positively significant relationship between affiliative humor and creativity.
H_2: There is a positively significant relationship between self-enhancing humor and creativity.
H_3: There is a negatively significant relationship between aggressive humor and creativity.
H_4: There is a negatively significant relationship between self-defeating humor and creativity.

3. Innovation Climate as a Moderator

'Climate', which is used to describe the long-term weather conditions in a specific area, is also used to describe the psycho-social conditions observed in a particular organization in management literature. Ekvall (1996) defined organizational climate as the sum of attributes, behaviors and emotions in an organization. Organizational climate has an influence on both operational processes like problem-solving, decision-making, communication, coordination and controlling and also on psychological processes like learning, creativity, motivation and commitment. Hence, it could be concluded that climate plays a moderating role in operational outcomes (Ekvall, 1996).

Organizational climate has a vital role on the transformation and enhancement of the attributes and behaviors of the employees. Similarly, Saleh and Wang (1993) asserted that organizational climate is a factor which facilitates and encourages innovation besides all other organizational factors such as strategy, structure, environment and leadership. It is obvious that there is a positively significant relationship between the creative behavior and the innovation climate (Scott and Bruce, 1994). Thus, it is important to understand the impacts of the innovation climate on employee creative behavior as well as how the innovation climate brings out the creative behavior.

Distinguishing the innovation climate by two dimensions as 'resource supply' and 'support for innovation', Scott and Bruce (1994) argued that creativity and innovation has same antecedents despite the fact that they are different constructs. In addition, the research of Yu *et al.* (2013) stressed that a powerful innovation climate definitely reinforces the creative behavior of employees. According to Van der Vegt *et al*. (2005), innovation climate is the common perception of the organizational members for all practices, processes and behaviors with respect to generation, development and realization of new and useful ideas. In a strong organizational innovation climate, development of new and useful ideas are supported and employees are encouraged to find and learn new ways of doing things.

Consequently, it can be mentioned that innovation climate provides a contextual power to prompt employee creative behavior. If employee creative behavior is defined as the creation of new and useful things beyond the predefined role descriptions (Janssen, 2000), it is clear that there is a need for a strong stimulant to trigger the feeling of creating something new. Likewise, Pundt (2015) suggested that perceived innovation climate stimulates the employee's perception that they are expected to be creative. Thus, it could be interpreted that innovation climate provides a support for formation of creative behavior, by affecting the emotional state of the employees through the perceptions of the members of the organization.

Furthermore, emphasizing that creative climate would contribute to the development of innovation in an organization, Ekvall (1996) developed Creative Climate Model and proposed the following ten dimensions: 'challenge', 'freedom', 'idea support', 'trust/openness', 'dynamism/liveliness', 'playfulness/humor', 'debates', 'conflicts', 'risk-taking' and 'idea time'. As it can be seen, one of the dimensions of the creative climate in this model is 'playfulness/humor'. This reveals that an organizational climate which provokes jokes and laughter, cultivates creativity and innovation.

To conclude, not only individual creativity but also humor, particularly positive humor generation is encouraged in organizations via innovation climate. Accordingly, it can be argued that there is a significant relationship between humor styles, notably positive humor styles, and creativity and innovativeness levels of that organizational climate. In this research we concentrate on academics' perceptions of innovation climate in their universities. Therefore, we hypothesized that perceived innovation climate of the universities moderates the relationship between humor styles and creativity:

$H_{5:}$ Innovation climate moderates the relationship between affiliative humor and creativity.
$H_{6:}$ Innovation climate moderates the relationship between self-enhancing humor and creativity.
$H_{7:}$ Innovation climate moderates the relationship between aggressive humor and creativity.
$H_{8:}$ Innovation climate moderates the relationship between self-defeating humor and creativity.

4. Methodology

Based on the previous discussion, Figure 1 illustrates the research model and gives a snapshot of the variables and hypotheses guiding this study. As shown in Figure 1, the research model proposes that there is a significant relationship between humor styles and creativity. Besides, it proposes that innovation climate moderates this relationship.

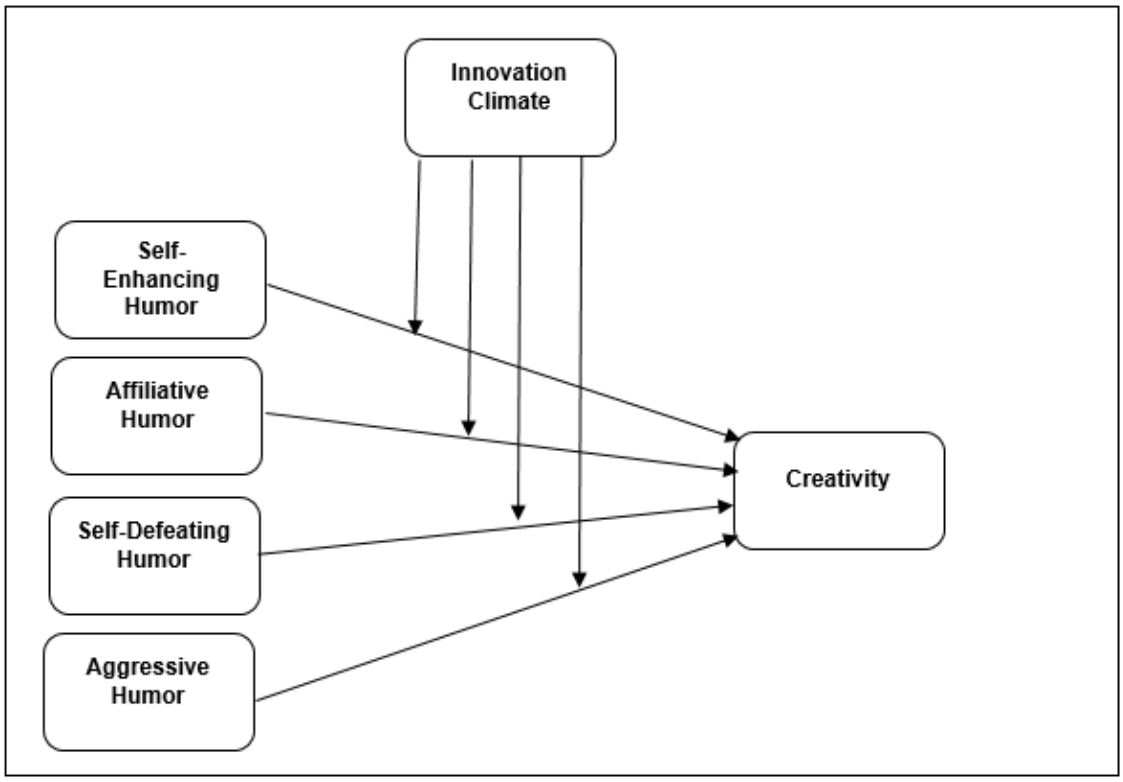

Figure 1. Research Model

Questionnaires were sent to 1000 academics at various levels in public and private universities in Turkey by using a random sampling method. Consequently, 362 thoroughly completed questionnaires were received. 55.8% of the respondents worked at private and 44.2% work at public universities and 35.6% of the respondents were with a tenure of 5 years or less in their current university. Engineering (35.6%) and Economics and Business Administration (28.7%) faculties had the highest participation rate in the research and 71% of the respondents were faculty members, 6.6% being assistant professors, 35.4% associate professors and 29% professors.

Humor styles were measured using Humor Styles Questionnaire by Martin *et al.* (2003). Humor Styles Questionnaire consists of 32 items, each of which is a self-descriptive statement about particular styles of humor. Respondents rated the degree to which each statement describes their humor style on a scale from 1 (totally disagree) to 7 (totally agree). Scores are obtained for 4 dimensions including: self-enhancing humor, affiliative humor, self-defeating humor and aggressive humor.

Creativity was measured using Employee Creative Behavior Questionnaire by Rice (2006). The Employee Creative Behavior Questionnaire consists of 9 items, each of which is a self-descriptive statement about individual creativity at workplace. Respondents rated the degree to which each statement describes them on a scale from 1 (totally disagree) to 5 (totally agree). Scores are obtained for 1 dimension relating to how the respondents perceive their individual creativity at workplace.

Innovation climate was measured using Climate for Innovation Questionnaire by Nybakk *et al.* (2011). The Climate for Innovation Questionnaire consists of 20 items, each of which is a statement about innovation climate. Respondents rated the degree to which each statement describes their organizational climate on a scale from 1 (totally disagree) to 5 (totally agree). Scores are obtained for 5 dimensions including: team cohesion, supervisory encouragement, resources, autonomy and openness to innovation.

5. Analysis and Results

Firstly, all items were checked for normality. The convergent properties of formative variables were tested by principal component extraction and varimax rotation. The results proved satisfactory convergent properties for the variables used in the study (Kaiser-Meyer-Olkin(KMO)=0.87; Bartlett=13,101.44; Significance=0.00). Then, correlation, structural equation model and hierarchical regression analysis were used to test the hypotheses. Table 1 demonstrates the descriptive statistics, means, standard deviations, and correlations of all constructs. Correlation coefficients which show the linear relationships between the variables, indicate that creativity variable forms statistically significant relationships with humor styles and innovation climate variables at p<0.01 level.

Table 1. Descriptive Statistics and Correlations of the Variables (n=362)

Construct	Mean	Standard Deviation	1	2	3	4	5	6	7	8	9	10
1. Affiliative Humor	4.09	0.62	1									
2. Self-Enhancing Humor	3.60	0.61	0.70**	1								
3. Aggressive Humor	2.54	0.68	0.41**	0.42**	1							
4. Self-Defeating Humor	3.50	0.69	0.56**	0.53**	0.54**	1						
5. Team Cohesion	3.29	0.61	0.29**	0.37**	0.24**	0.28**	1					
6.Supervisory Encouragement	3.06	0.65	0.31**	0.35**	0.21**	0.26**	0.62**	1				
7. Resources	3.62	0.59	0.25**	0.20**	0.19**	0.27**	0.49**	0.48**	1			
8. Autonomy	3.60	0.63	0.31**	0.22**	0.25**	0.38**	0.45**	0.40**	0.51**	1		
9. Openness to Innovation	2.96	0.83	-0.20**	-0.23**	-0.31**	-0.34**	-0.45**	-0.46**	-0.48**	-0.45**	1	
10. Creativity	3.84	0.61	0.50**	0.49**	0.15**	0.30**	0.35**	0.35**	0.29**	0.22**	-0.22**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

In order to test the causality relationship between the observed and latent variables, we proposed a structural equation model. Model fix index (Table 2) revealed that our model is an acceptable fit with Chi-Square(CMIN)=1,256.68; Chi-Square/Degrees of Freedom(CMIN/DF)=3.74; Incremental Fit Index(IFI)=0.87; Tucker-Lewis Fit Index(TLI)=0.86; Comparative Fit Index(CFI)=0.87; and Root Mean Square Error of Approximation(RMSEA)=0.09 (Hooper *et al.* 2008; Hu and Bentler, 1995; MacCallum *et al.* 1996, Wheaton *et al.* 1977).

Table 2. Model Fit Index

CMIN	DF	P	CMIN/DF	IFI	TLI	CFI	RMSEA
1,256.68	336	0.00	3.74	0.87	0.86	0.87	0.09

For the proposed first 4 hypotheses in the study, structural equation model was performed. The results suggested that 3 hypotheses were supported. Table 3 illustrates the path analysis on humor styles and creativity relationship. Accordingly, H_1, which proposed that there is a positively significant relationship between affiliative humor and creativity, was supported (β=0.34; p=0.00). Likewise, H_2, which proposed that there is a positively significant relationship between self-enhancing humor and creativity, was supported (β=0.35; p=0.00). On the other hand, while H_3, which proposed that there is a negatively significant relationship between aggressive humor and creativity, was supported (β=-0.14; p=0.04) but H_4, which proposed that there is a negatively significant relationship between self-defeating humor and creativity was not supported (p=0.93).

Table 3. Path Analysis for Humor Styles and Creativity Relationship (n=362)

Hypotheses	Relationship			Beta*	S.E.	P	Results
H_1	Creativity	<---	Affiliative Humor	0.34	0.08	0.00	Supported
H_2	Creativity	<---	Self-Enhancing Humor	0.35	0.08	0.00	Supported
H_3	Creativity	<---	Aggressive Humor	-0.14	0.05	0.04	Supported
H_4	Creativity	<---	Self-Defeating Humor	-0.01	0.06	0.93	Not supported

Note: *Path coefficients were standardized.

In order to test the second 4 hypotheses which investigates the moderator role of innovation climate on the relationship between humor styles and creativity, we used 5 different hierarchical regression models. Table 4 below illustrates the results of the first hierarchical regression model, which was designed to test the moderator role of 'team cohesion' dimension of innovation climate, on the relationship between humor styles and creativity:

Table 4. Team Cohesion as a Moderator (n=362)

Model	Variables	Coefficients	t	P
1	Aff_Hum	0.33	5.13	0.00
	SE_Hum	0.24	3.71	0.00
	Agg_Hum	-0.14	-2.59	0.01
	SD_Hum	0.02	0.27	0.79
	Tea_Coh	0.19	4.13	0.00
2	Aff_Hum	0.27	4.00	0.00
	SE_Hum	0.22	3.24	0.00
	Agg_Hum	-0.06	-1.04	0.30
	SD_Hum	-0.03	-0.45	0.65
	Tea_Coh	0.26	5.38	0.00
	AffHumxTeaCoh	-0.18	-2.99	0.00
	SDHumxTeaCoh	0.00	0.04	0.97
	AggHumxTeaCoh	0.19	3.89	0.00
	SDHumxTeaCoh	0.10	0.38	0.71

Note: Dependent Variable: Creativity, Aff_Hum: Affiliative Humor, SE_Hum: Self-Enhancing Humor, Agg_Hum: Aggressive Humor, SD_Hum: Self-Defeating Humor, Tea_Coh: Team Cohesion.

As can be seen in the analysis results, 'team cohesion' dimension moderates the relationship between 'affiliative humor' and 'creativity' and 'aggressive humor' and 'creativity'. However, 'team cohesion' dimension has no significant moderating effect on the relationship between 'self-enhancing humor' and 'creativity' and 'self-defeating humor' and 'creativity'. Table 5 shows the results of the second hierarchical regression model, which was designed to test the moderator role of 'supervisory encouragement' dimension of innovation climate, on the relationship between humor styles and creativity:

Table 5. Supervisory Encouragement as a Moderator (n=362)

Model	Variables	Coefficients	t	P
1	Aff_Hum	0.32	4.93	0.00
	SE_Hum	0.25	3.88	0.00
	Agg_Hum	-0.13	-2.47	0.01
	SD_Hum	0.02	0.31	0.76
	Sup_Enc	0.20	4.20	0.00
2	Aff_Hum	0.33	5.02	0.00
	SE_Hum	0.22	3.45	0.00
	Agg_Hum	-0.08	-1.60	0.11
	SD_Hum	-0.02	-0.27	0.79
	Sup_Enc	0.22	4.73	0.00
	AffHumxSup_Enc	-0.10	-1.43	0.15
	SEHumxSup_Enc	0.00	0.04	0.97
	AggHumxSup_Enc	0.21	4.19	0.00
	SDHumxSup_Enc	0.00	0.01	0.99

Note: Dependent Variable: Creativity, Aff_Hum: Affiliative Humor, SE_Hum: Self-Enhancing Humor, Agg_Hum: Aggressive Humor, SD_Hum: Self-Defeating Humor, Sup_Enc: Supervisory Encouragement.

As can be seen in the analysis results, 'supervisory encouragement' dimension only moderates the relationship between 'aggressive humor' and 'creativity'. However, 'team cohesion' dimension has no significant moderating effect on the relationship between other humor styles and creativity. Table 6 exhibits the results of the third hierarchical regression model, which was designed to test the moderator role of 'resources' dimension of innovation climate, on the relationship between humor styles and creativity:

Table 6. Resources as a Moderator (n=362)

Model	Variables	Coefficents	t	P
1	Aff_Hum	0.31	4.74	0.00
	SE_Hum	0.29	4.70	0.00
	Agg_Hum	-0.13	-2.43	0.02
	SD_Hum	0.00	-0.01	1.00
	Resources	0.18	3.91	0.00
2	Aff_Hum	0.30	4.44	0.00
	SE_Hum	0.28	4.27	0.00
	Agg_Hum	-0.12	-2.20	0.03
	SD_Hum	0.02	0.27	0.79
	Resources	0.17	3.59	0.00
	AffHumxResources	0.08	1.23	0.22
	SEHumxResources	-0.13	-2.01	0.05
	AggHumxResources	0.12	2.25	0.03
	SDHumxResources	-0.07	-1.25	0.21

Note: Dependent Variable: Creativity, Aff_Hum: Affiliative Humor, SE_Hum: Self-Enhancing Humor, Agg_Hum: Aggressive Humor, SD_Hum: Self-Defeating Humor.

As can be seen in the analysis results, 'resources' dimension moderates the relationship between 'self-enhancing humor' and 'creativity' and 'aggressive humor' and 'creativity'. Yet, 'resources' dimension has no significant moderating effect on the relationship between 'affiliative humor' and 'creativity' and 'self-defeating humor' and 'creativity'. Table 7 depicts the results of the fourth hierarchical regression model, which was designed to test the moderator role of 'autonomy' dimension of innovation climate, on the relationship between humor styles and creativity:

Table 7. Autonomy as a Moderator (n=362)

Model	Variables	Coefficents	t	P
1	Aff_Hum	0.32	4.817	0.000
	SE_Hum	0.30	4.695	0.000
	Agg_Hum	-0.13	-2.344	0.020
	SD_Hum	0.00	0.050	0.960
	Autonomy	0.09	1.866	0.063
2	Aff_Hum	0.30	4.28	0.00
	SE_Hum	0.30	4.59	0.00
	Agg_Hum	-0.11	-1.96	0.05
	SD_Hum	-0.00	-0.03	0.98
	Autonomy	0.08	1.53	0.13
	AffHumxAutonomy	-0.07	-0.93	0.35
	SEHumxAutonomy	-0.01	-0.18	0.86
	AggHumxAutonomy	0.01	0.17	0.86
	SDHumxAutonomy	0.012	0.33	0.74

Note: Dependent Variable: Creativity, Aff_Hum: Affiliative Humor, SE_Hum: Self-Enhancing Humor, Agg_Hum: Aggressive Humor, SD_Hum: Self-Defeating Humor.

As can be seen in the analysis results, 'autonomy' dimension has no significant moderating effect on the relationship between none of the humor styles and 'creativity'. Table 8 highlights the results of the fifth and last hierarchical regression model, which was designed to test the moderator role of 'openness to innovation' dimension of innovation climate, on the relationship between humor styles and creativity:

Table 8. Openness to Innovation as a Moderator (n=362)

Model	Variables	Coefficients	t	P
1	Aff_Hum	0.34	5.21	0.00
	SE_Hum	0.28	4.48	0.00
	Agg_Hum	-0.14	-2.66	0.01
	SD_Hum	0.00	0.01	0.99
	Openness	-0.13	-2.68	0.01
2	Aff_Hum	0.34	5.05	0.00
	SE_Hum	0.24	3.63	0.00
	Agg_Hum	-0.13	-2.33	0.02
	SD_Hum	0.01	0.19	0.85
	Openness	-0.13	-2.73	0.01
	AffHumxOpenness	0.05	0.64	0.53
	SEHumxOpenness	0.07	1.10	0.27
	AggHumxOpenness	-0.07	-1.19	0.23
	SDHumxOpenness	-0.02	-0.32	0.75

Note: Dependent Variable: Creativity, Aff_Hum: Affiliative Humor, SE_Hum: Self-Enhancing Humor, Agg_Hum: Aggressive Humor, SD_Hum: Self-Defeating Humor, Openness: Openness to Innovation.

As can be seen in the analysis results, 'openness to innovation' dimension has no significant moderating effect on the relationship between none of the humor styles and 'creativity'. All in all, the findings reveal that innovation climate appears to be partially moderating the relationship between 'affiliative humor', 'self-enhancing humor', 'aggressive humor' and creativity. Consequently, H_5, H_6 and H_7 hypotheses were partially supported. On the other hand, none of the dimensions of innovation climate has a significant moderating effect on the relationship between 'self-defeating humor' and 'creativity'. Therefore, H_8 was not supported.

6. Conclusion

This study investigated the relationship between the different styles of humor and creativity and revealed a significant relationship that was partially moderated by the innovation climate. These findings provide several theoretical implications as well as important practical implications. Firstly, as indicated by previous research (Holmes, 2007; Lang and Lee, 2010; Pundt, 2015; Slatten *et al.* 2011; Ziv, 1976), humor is a significant component of creativity. This study contributes to the literature by extending the previous research in that different humor styles have different impacts on individual creativity.

Secondly, the innovation climate also has an effect on the relationship between humor styles and creativity, yet the extent of this effect is only partial, not as strong as suggested in the hypotheses. While 'team cohesion', 'supervisory encouragement' and 'resources' dimensions partially moderate the relationship between humor styles and creativity, 'autonomy' and 'openness to innovation' have no significant moderating effect on the relationship between none of the humor styles and creativity. The results support that other contextual elements like job characteristics, organizational structure, relational processes, leadership styles etc., need to be further examined in the future research.

Moreover, this study proposes two practical implications for academia. Firstly, in order to achieve organizational goals, universities should learn how to make use of humor appropriately, encourage positive humorous communication and pay attention to avoid the use of dark side of humor. Secondly, it is important to cultivate an innovation climate which encourages freedom and flexibility that fosters humor as well as creativity, and reinforces the relationship between humor and creativity. Lastly, universities should aim to create an organizational culture which recognizes humor as an effective and integral element of that culture.

To our knowledge, no previous reserach emprically addressed the relationship between humor styles and creativity in an academical context. However, the results validate the suggestions in the literature that assert the significance of humor for creativity and organizational effectiveness (Holmes, 2007; Miller, 1996; Slatten *et al.* 2011). Thus, the findings reveal that humor styles could be important drivers for individual creativity. Moreover, the results support the relief theory of humor (Freud, 1928), the incogruity theory of humor (Kant, 2007) as well as the broaden-and-build theory of positive psychology (Fredrickson, 2001) and hence make an exclusive contribution to both creativity and humor literature.

Yet, there are limitations and therefore, this study also contributes to the need for more research related to humor and creativity in academia. Firstly, a broader approach would be to further investigate the drivers and consequences of positive and negative humor styles. Secondly, this study did not consider the individual factors. Future research should include individual differences such as personality and cognitive style/ability (Woodman and Schoenfeldt, 1989). Thirdly, measuring humor styles and creativity by self-report scales may also be accepted as a limitation and future research should add supervisor and/or peer scales as well. Lastly, small sample size (n=362) could have decreased the power of the moderator effect. This also explains the fact that the proposed moderator effect of innovation climate was only partial. Future studies should consider to work on larger samples to ensure that power of the moderation is not small due to the size of the sample.

References

Amabile, T., 1983. *The social psychology of creativity*, New York: Springer-Verlag. https://doi.org/10.1007/978-1-4612-5533-8

Amabile, T. M., 1988. A model of creativity and innovation in organizations. In: B. M. Staw, and L. L. Cummings, eds. 1988. *Research in organizational behavior*, 10, pp. 123-167. Greenwich, CT: JAI Press.

Amabile, T. M., 1996. *Creativity in context*. Boulder: Westview.

Baer, J., 1997. *Creative teachers, creative students*. Boston: Ally and Bacon.

Appu, A. V., Sia, S. K. and Sahoo, B. C., 2015. Creativity at workplace: Proposing some contributors. *International Journal of Innovative Research and Development*, 4(5), pp. 177-183.

Bizi, S., Keinan, G. and Beit-Hallahmi, B., 1988. Humor and coping with stress: A test under real-life conditions. *Personality and Individual Differences*, 9(6), pp. 951-956. https://doi.org/10.1016/0191-8869(88)90128-6

Blanchard, A., Stewart, O. J., Cann, A., and Follman, L., 2014. Making sense of humor at work. *The Psychologist Manager Journal*, 17(1), pp. 49-70. https://doi.org/10.1037/mgr0000011

Cooper, C. D., 2005. Just joking around? Employee humor expression as an ingratiatory behavior. *Academy of Management Review*, 30(4), pp. 765-776. https://doi.org/10.5465/amr.2005.18378877

Crawford, C. B., 1994. Theory and implications regarding the utilization of strategic humor by leaders. *Journal of Leadership Studies*, 1(4), pp. 53-67. https://doi.org/10.1177/107179199400100406

Csikszentmihalyi, M., 1991. Society, culture and person: A systems view of creativity. In: R. J. Sternberg, ed. 1991. *The nature of creativity: Contemporary psychological perspectives*. New York: Cambridge University Press. pp. 273-296.

DiLiello, T. C. and Houghton, J. D., 2008. Creative potential and practised creativity: Identifying untapped creativity in organizations. *Creativity and Innovation Management*, 17(1), pp. 37-46. https://doi.org/10.1111/j.1467-8691.2007.00464.x

Ehrhart, M. G., Schneider, B. J., and Macey, W. H., 2013. *Organizational climate and culture: An introduction to theory, research and practice*. London: Routledge. https://doi.org/10.4324/9781315857664

Ekvall, G., 1996. Organizational climate for creativity and innovation. *European Journal of Work and Organizational Psychology*, 5(1), pp. 105-123. https://doi.org/10.1080/13594329608414845

Eysenck, H. J., 1972. Foreword. In: J. H. Goldstein, and P. E. McGhee, eds. 1972. *The psychology of humor*. New York, NY: Academic Press. pp. 13-17.

Feingold, A. and Mazzella, R., 1993. Preliminary validation of a multidimensional model of wittiness. *Journal of Personality*, 61(3), pp. 439-456. https://doi.org/10.1111/j.1467-6494.1993.tb00288.x

Fredrickson, B. L., 2001. The role of positive emotions in positive psychology: The broaden-and-build theory of positiveemotions. *American Psychologist*, 56(3), pp. 218-226. https://doi.org/10.1037/0003-066X.56.3.218

Fredrickson, B. L., 2003. Positive emotions and upwards spirals in organizations. In: K. S. Cameron, J. E. Dutton, and R. E., Quinn, eds. 2003. *Positive organizational Scholarship.* San Francisco, CA: Berrett Koehler. pp. 163-175.

Freud, S., 1928. Humor. *International Journal of Psychoanalysis*, 9, pp. 1-6.

George, J. M., 2008. Creativity in organizations. In: J. P. Walsh, A. P. Brief, eds. 2008. *Academy of management annals: Vol 1*. New York, NY: Taylor & Francis Group. pp. 439-477. https://doi.org/10.1037/0021-9010.86.3.513

George, J. M. and Zhou, J., 2001. When openness to experience and conscientiousness are related to creative behavior: An interactional approach. *Journal of Applied Psychology*, 86, pp. 513-524.

Goodman, J., 1983. How to get more smileage out of your life: Making sense of humor, then serving it. In: P. E. McGhee and J. H. Goldstein, eds. 1983. *Handbook of research in humor: Vol II. Applied Studies.* New York, NY: Springer-Verlag, pp. 1-21.

Holmes, J., 2007. Making humour work: Creativity on the job. *Applied Linguistics*, 28(4), pp. 518-537. https://doi.org/10.1093/applin/amm048

Hooper, D., Coughlan, J., and Mullen, M. R., 2008. Structural equation modelling: Guidelines for determining model fit. *The Electronic Journal of Business Research Methods*, 6(1), pp. 53-60.

Hu, L. T., and Bentler, P. M., 1995. Evaluating model fit. In: R. H. Hoyle, ed. 1995. *Structural equation modeling: Concepts, issues, and applications.* Thousand Oaks: Sage. pp. 76-99.

Janssen, O., 2000. Job demands, perceptions of effort-reward fairness, and innovative work behavior. *Journal of Occupational and Organizational Psychology*, 73, pp. 287–302. https://doi.org/10.1348/096317900167038

Kant, I., 2007. *Critique of judgement.* New York: Oxford University Press.

Kasof, J., 1999. Attribution and creativity. In: M. A. Runco and S. R. Pritzker, eds. 1999. *Encyclopedia of creativity.* New York: Academic Press. pp. 147-157.

Kuiper, N. A., Martin, R. A. and Dance, K., 1992. Sense of humor and enhanced quality of life. *Personality and Individual Differences*, 13(12), pp. 1273-1283. https://doi.org/10.1016/0191-8869(92)90169-P

Kuiper, N. A. and Nicholl, S., 2014. Thoughts of feeling better? Sense of humor and physical health. *Humor: International Journal of Humor Research*, 17(1/2), pp. 37-66.

Lang, J. C. and Lee, C. H., 2010. Workplace humor and organizational creativity. *The International Journal of Human Resource Management*, 21, pp. 46-60. https://doi.org/10.1080/09585190903466855

Lefcourt, H. M. and Martin, R. A., 1986. *Humor and life stress: Antidote to adversity.* New York, NY: Springer. https://doi.org/10.1007/978-1-4612-4900-9

Lynch, O., 2002. Humorous communication: Finding a place for humor in communication research. *Communication Theory*, 12(4), pp. 423-446. https://doi.org/10.1111/j.1468-2885.2002.tb00277.x

Malinowsky, A. J., 2013. Characteristics of job burnout and humor among psychotherapists. *De Gruyter Mouton*, 26(1), pp. 117-133. https://doi.org/10.1515/humor-2013-0007

MacCallum, R. C., Browne, M. W., and Sugawara, H., M., 1996. Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1(2), pp. 130-149. https://doi.org/10.1037/1082-989X.1.2.130

Martin, R. A., 2007. *The psychology of humor: An integrative approach.* Burlington, MA: Elsevier. https://doi.org/10.1016/B978-012372564-6/50024-1

Martin, R. A., Puhlik-Doris, P., Larsen, G., Gray, J. and Weir, K., 2003. Individual differences in uses of humor and their relation to psychological well-being: Development of the humor styles questionnaire. *Journal of Research in Personality*, 37(1), pp. 48-75. https://doi.org/10.1016/S0092-6566(02)00534-2

Martineau, W. H., 1972. A model of the social functions of humor. In: J. Goldstein, P. McGhee, eds. 1972. *The psychology of humor*. New York, NY: Academic Press. pp. 101-125. https://doi.org/10.1016/B978-0-12-288950-9.50011-0

Mesmer-Magnus, J., Glew, D. J. and Viswesvaran, C., 2012. A meta-analysis of positive humor in the workplace. *Journal of Managerial Psychology*, 27(2), pp. 155-190. https://doi.org/10.1108/02683941211199554

Orwell, G., 1968. *The collected essays, journalism and letters of George Orwell.* New York: Harcourt Brace Jovanovich.

Miller, J., 1996. Humor – an empowerment tool for the 1990s. *Empowerment in Organizations*, 4(2), pp. 16-21. https://doi.org/10.1108/09684899610118046

Nybakk, E., Crespell, P. and Hansen, E., 2011. Climate for innovation and innovation strategy as drivers for success in the wood industry: Moderation effects of firm size, industry sector, and country of operation. *Silva Fennica*, 45(3), pp. 415-430. https://doi.org/10.14214/sf.110

Pundt, A., 2015. The relationship between humorous leadership and innovative behavior. *Journal of Managerial Psychology*, 30(8), pp. 878-893. https://doi.org/10.1108/JMP-03-2013-0082

Rice, G., 2006. Individual values, organizational context and self perceptions of employee creativity: Evidence from Egyptian organizations. *Journal of Business Research*, 59(2), pp. 233-241. https://doi.org/10.1016/j.jbusres.2005.08.001

Robert, C. and Yan, W., 2007. The case for developing new research on humor and culture in organizations: Toward a higher grade of manure. *Research in Personnel and Human*

Resource Management, 26, pp. 205-267. https://doi.org/10.1016/S0742-7301(07)26005-0

Romero, E. J. and Cruthirds, K. W., 2006. The use of humor in the workplace. *Academy of Management Perspectives*, 20(2), pp. 58-69. https://doi.org/10.5465/amp.2006.20591005

Runco, M., 1998. Book review. *The Journal of Creative Behavior*, 32, pp. 92-95.

Saleh, S. D. and Wang, C. K., 1993. The management of innovation: Strategy, structure and organizational climate. *IEEE Transactions on Engineering Management*, 40, pp. 13-21. https://doi.org/10.1109/17.206645

Scott, S. G. and Bruce, R. A., 1994. Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of Management Journal*, 37, pp. 580-607.

Sherman, L. W., 1988. Humor and social distance in elementary school children. *Humor: International Journal of Humor Research*, 1(4), pp. 389-404. https://doi.org/10.1515/humr.1988.1.4.389

Slatten, T., Svensson, G. and Svaeri, S., 2011. Empowering leadership and the influence of a humorous work climate on service employees' creativity and innovative behaviour in frontline service jobs. *International Journal of Quality and Service Sciences*, 3(3), pp. 267-284. https://doi.org/10.1108/17566691111182834

Stein, M. I., 1953. Creativity and culture. *The Journal of Psychology*, 36(2), pp. 311-22. https://doi.org/10.1080/00223980.1953.9712897

Svebak, S., 1974. Revised questionnaire on the sense of humor. *Scandinavian Journal of Psychology*, 15, pp. 99-107. https://doi.org/10.1111/j.1467-9450.1974.tb00561.x

Svebak, S., 1996. The development of the sense of humor questionnaire: from SHQ to SHQ-6. *Humor: International Journal of Humor Research*, 9(3/4), pp. 341-361. https://doi.org/10.1515/humr.1996.9.3-4.341

Thorson, J. A. and Powell, F. C., 1993. Development and validation of a multidimensional sense of humor scale. *Journal of Clinical Psychology*, 49(1), pp. 13-23. https://doi.org/10.1002/1097-4679(199301)49:1<13::AID-JCLP2270490103>3.0.CO;2-S

Tumkaya, S., 2007. Burnout and humor relationship among university lecturers. *Humor: International Journal of Humor Research*, 20(1), pp. 73–92. https://doi.org/10.1515/HUMOR.2007.004

Van der Vegt, G. S., Van de Vliert, E. and Huang, X., 2005. Location-level links between diversity and innovative climate depend on national power distance. *Academic Management Journal,* 48(6), pp. 1171-1182. https://doi.org/10.5465/amj.2005.19573116

Wheaton, B., Muthen, B., Alwin, D. F., and Summers, G., 1977. Assessing reliability and stability in panel models. *Sociological Methodology*, 8(1), pp. 84-136. https://doi.org/10.2307/270754

Wood, R. E., Beckmann, N. and Pavlakis, F., 2007. Humor in organizations: No laughing matter, *Research companion to the dysfunctional workplace: Management challenges and symptoms*, 216-231. Northhampton, MA: Edward Elgar Publishing.

Woodman, R. W. and Schoenfeldt, L. F., 1989. Individual differences in creativity. In: J. A. Glover, R. R. Ronning and C. R. Reynolds, eds. 1989. *Handbook of creativity*. Perspectives on Individual Differences. Boston, MA: Springer. pp. 77-91. https://doi.org/10.1007/978-1-4757-5356-1_4

Yu, C., Yu, T. F. and Yu, C. C., 2013. Knowledge sharing, organizational climate, and innovative behavior: A cross-level analysis of effects. *Social Behavior and Personality*, 41(1), pp. 143-156. https://doi.org/10.2224/sbp.2013.41.1.143

Ziv, A., 1976. Facilitating effects of humor on creativity. *Journal of Educational Psychology,* 68, pp. 318-222. https://doi.org/10.1037/0022-0663.68.3.318