PalArch's Journal of Archaeology of Egypt / Egyptology

FACTORS AFFECTING SOCIAL BEHAVIOR OF ENGINEERS - A PLS-SEM APPROACH

Arpan Sinha[1], Teena Bagga[2],Seema Johar[3]

[1]Scholar, Amity Business School, Amity University Uttar Pradesh, Noida

[2]Professor, Amity Business School, Amity University Uttar Pradesh, Noida

[3]Assistant Professor, Amity Institute of Corporate Communications, Amity University Uttar Pradesh

Arpan Sinha, Teena Bagga, Seema Johar.FACTORS AFFECTING SOCIAL BEHAVIOR OF ENGINEERS - A PLS-SEM APPROACH--Palarch's Journal Of Archaeology Of Egypt/Egyptology 17(7), 6161-6173. ISSN 1567-214x

Keywords: Manufacturing sector, Pls-Sem, Social behavior, Service sector

ABSTRACT:
Social behavior of individuals could be influenced by number of factors. This research studed the social behavior of 456 engineers working in Manufacturing and Service sector. The data was collected from both Manufacturing and Service Sector and reliability of the sample was checked through composite reliability values and Cronbach's alpha values. Partial Least Square-Structured Equation Modelling was used to analyze the data and post-analysis, it was found that social behavior of employees gets positively influenced by some factors while some factors result in negatively influencing their social behavior. Upon analyses, three hypotheses namely, learning ability, motivation and personal value were found to be positively associated with social behavior and are accepted but no association is observed between organizational culture and social behavior therefore it was rejected. Finally, managerial implications of the study are discussed which can serve as the directions of future research.

INTRODUCTION

Social Behavior

Social Behavior is one of the necessary activities for all the living beings present on planet Earth. It is the interaction, both verbal and non-verbal between these living beings which is helpful in their survival. Social Behavior is found in all kinds of animals, plants who are likely to reproduce and survive. In this paper we will be focusing on the Homo-Sapiens or the people. Social Behavior is made from two words, 'Social' and 'Behavior'.

Social Behavior is the act done by humans of giving a response to their internal and external stimuli. It is how two are more organisms of same species behaves with each other. It also encompasses the affect one member of the species have on other due to their behavior. Social behavior is affected by two things, first the quality of the individual who is involved in the process of social behavior and second, the environment or the situation in which the social behavior takes place. And in present era, social behavior of employees was subjectively influenced by technological disruptions like Artificial Intelligence(Vishnoi, Bagga, Sharma, & Wani, 2018), Business Intelligence(Tripathi, Bagga, & Aggarwal, 2020), Marketing Intelligence (Vishnoi & Bagga, 2020) and Intelligent Automation (Vishnoi, Tripathi, & Bagga, 2019).

"Sociality means group-living. The formulation of any general theory of social behavior begins, therefore, with a description of the selective forces causing and maintaining group-living." (Alexander, 1974). The definition meant that sociality means living in a group. Living in group marks the beginning of social behavior. "The group's behavior could just as easily be interpreted as a petty, coercive attempt to enforce conformity, a form of group tyranny" (Homans, 1974). The definition meant that some groups behave in a petty and coercive way in order to enforce conformity. "According to Hamilton's genetical theory of social behavior (Hamilton, 1964a, b), a social act is favored by natural selection if it increases the inclusive fitness of the performer" (Eberhard, 1975). The definition meant that any social act is influenced by the natural selection or genes that the person is born with. But companies like Dell are training their employees to cope with this changing environment and simultaneously maximizing the quality of delivered service (Bagga & Khanna, 2014). Similarly, companies are also employing HRIS (Human Resource Information System) to reduce the task orientation of their employees and improve their social behavior (Srivastava & Bagga, 2014). Additionally, social networking sites were also a dominant factor impacting social behavior of employees (Bagga, 2012).

LITERATURE REVIEW

Theoretical Framework

"Sociality means group-living. The formulation of any general theory of social behavior begins, therefore, with a description of the selective forces causing and maintaining group- living" (Alexander, 1974). The definition meant that sociality means living in a group. Living in group marks the beginning of social behavior. "The group's behavior could just as easily be interpreted as a petty, coercive attempt to enforce conformity, a form of group tyranny" (Homans, 1974). The definition meant that some groups behave in a petty and coercive way in order to enforce conformity. "According to Hamilton's genetical theory of social behavior (Hamilton, 1964a, b), a social act is favored by natural selection if it increases the inclusive fitness of the performer" (Eberhard, 1975). The definition meant that any social act is influenced by the natural selection or genes that the person is born with. "A historical convenient point of departure for any consideration of personality and social behavior is Kurt Lewin's (1936) seminal proposition: "Every

psychological event depends upon the state of the person and at the same time on the environment, although their relative importance is different in different cases." The proposition that an individual's behavior in a social situation is determined both by characteristics of that individual (i.e., dispositional determinants of social behavior) and by characteristics of that situation (i.e., situational determinants of social behavior) is a fundamental tenet of most, if not all, strategies for conceptualizing and investigating personality, employee preference (Singh, Vishnoi, & Bagga, 2018) and social behavior"(Snyder, 1985). The definition meant that the psychological event that occurs in an individual happens due to the state the person is at that time along with the environment or situation he isfacing. "In other words, the self is an active agent that promotes differential sampling, processing, and evaluation of information from the environment, and thus leads to differences in social behavior" (Triandis, 1989). The definition meant that self actively promotes different samples, processes from the environment and then evaluates information of the environment which leads to different socialbehavior. "Referring to those domains of thought, feeling, and action concerned with people and events in their social worlds" (Snyder,1998). The definition meant that social behavior refers to thoughts, feelings and actions of people with others in their social worlds. "Social Perception, defined here as the activation of a perceptual representation, has a direct effect on social behavior. Perceptual inputs are translated automatically into corresponding behavioral outputs" (Dijksterhuis, 2001). The definition meant that Social Perception has a direct influence on Social Behavior and that perceptual inputs are translated into behavioral outputs. "Human Behavior as controlled by a "psychic apparatus" that includes several operating principles: a superego composed of a person's values and norms, an id that operates in accordance with the basic drives a person is endowed with, and an ego that integrates and often reconciles the forces from the superego and the id" (Strack, 2004). The definition meant that human behavior is controlled by several operating principles such as superego which is composed of a person's values and norms, an id that drives the person and an ego that integrates and reconciles with superego andid. "Animals perform many activities during the course of their lives with the goal of surviving and reproducing: they find food and mates, defend themselves, and in many cases care for their offspring or other relatives. These activities become social when they involve interactions among members of the same species in a way that influences immediate or future behavior. One of the fundamentals of social behavior is communication" (Robinson, 2008). The definition meant that animals perform several activities in their course of their lives these activities become social when they interact with the members of the same species and this influences their future and immediate behavior. He also tells that communication is fundamental to social behavior. "Positive Social Behavior is simply defined as behavior that benefits other people" (Staub, 2013). The definition meant that positive social behavior is any behavior that is of advantage to other people.

CONCEPTUAL FRAMEWORK

Relating Learning Abilities to Social Behavior: Learning ability is the ability of an individual wherein, he/she are competent enough to learn new things. The time a person decides to indulge himself in learning something, his/her

behavior towards others changes. For example, if a person knows that he/she has rights to take some leaves from organization, which means he/she has learned about the policies of leave, then they will be able to avail the leave and would also share the information with the colleagues. In fact, due to the inability of the person to learn he/she is often secluded by peers in social gatherings (Bellanti, 2000).Therefore, we posit

H1: Learning Abilities are positively associated to Social Behavior.

Relating Motivation to Social Behavior: Motivation is a tool that encourages people to indulge themselves in certain things. In case of Social Behavior if a person is highly motivated to get himself/herself engaged in social affairs like talking to people, sharing ideas with them, etc. he/she will be more socially outward. In case of extrinsic motivation, the person gets motivated when some other person maybe, a friend, family member, colleague, boss or acquaintance motivates the person by giving pep talks, monetary benefits, counseling, etc. In such a scenario the motivation is extrinsic or outward bound. There are several researches that relate motivation to social behavior. (Cesario, 2006) Therefore, we can posit that

H2: Motivation is positively associated to Social Behavior.

Relating Organizational Culture to Social Behavior: - Organizational Culture is related to Social Behavior is talked by several researchers who claim that having a positive, friendly, open, respectful Organizational Culture leads to a better social behavior of the person. If the person is exposed to daunting, unfriendly, disrespectful Organizational Culture he/she would restrain themselves from having social relations in the organizations which would hamper the productivityoftheorganizationandmoraleoftheemployee.Whenapersonismade comfortable in the organization, his roles and goals are clearly defined in that case the employee will tend to trust the organization and his/her colleagues. This will give them the boost to work hard for the organization. (Choi, 2007) Several researches explain that Organizational Culture is related to social behavior of a person. Therefore, we can posit that

H3: Organizational Culture is positively associated to Social Behavior.

Relating Personal Values to Social Behavior: - Personal Values are the set of beliefs that a person holds for himself. The values that one has are influenced by the internal and external world both. In case of internal world, the person's experiences and emotions lead him/her to make a value system. It is only dependent on the person. Whereas, in case of external world, people like parents, family members, teachers, society, friends, acquaintance, etc. influence the values of an individual. Based on these values the person's social behavior is framed. If the person's values don't allow him to talk much, he might not develop a good social connect. On the other hand, if the person's values allow him/her to openly talk about feelings, share ideas etc. his/her social behavior will be framed accordingly. The culture a person follows also decides his values which further affects his/her behavior (Roccas, 2010). There are several researches done that show case how personal values are related to the social behavior of a person. If the personal values of a person don't allow him to mingle with people, he/she will not. But if the personal

values allow him/her to do so then he/she would mingle. The literatures referred here suggest that Personal Values are related to Social Behavior. Therefore, we posit**that**
H4: Personal Values are positively associated to Social Behavior.

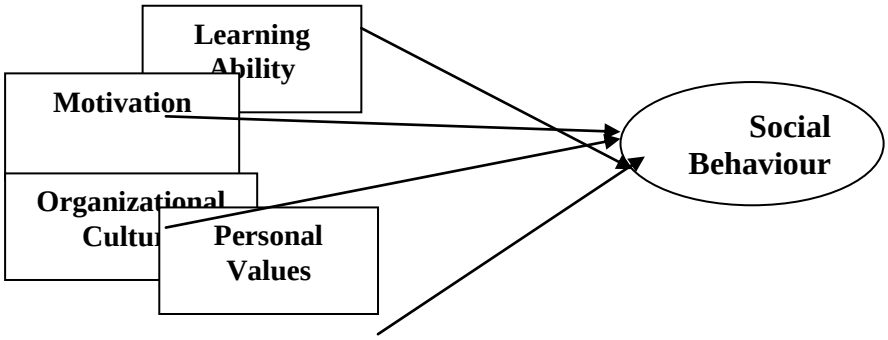

Figure 2.1: Factors Affecting Social Behavior

RESEARCH METHODOLOGY

Methodology adopted for the study is given below in figure 2, which clearly tells that first of all literature is surveyed in detail for the identification of factors affecting Social Behavior, further those factors are used in the preparation of questionnaire and responses based on that questionnaire after circulating the google forms. Finally, in this study (PLS-SEM) partial least square structural equation modeling is applied to analyze the research model. Reason behind the selection of method is that there are less restrictions. This tool is adopted for the current study as the hypothesis of the study are the prediction of the effect of constructs on the Social Behavior of a person. Firstly, Cronbach's alpha is checked to know the reliability of the data and validate it, followed by examining of structural model i.e. testing the hypothesis relationship. At the end bootstrapping method with 2000 resampling was applied in order to test the significant related path coefficients along with their loadings.

Data Analysis and Interpretation

The basis of this manuscript is to test the model and concerned hypotheses, firstly questionnaire is developed on a 5 Likert Scale and distributed to various employees working in manufacturing and services sector by adopting Random Sampling technique. The data is collected over a period of 1 month. Research design for the study is Exploratory in nature.

Measurement Model Assessments

For measurement model assessing first of all reliability and validating has been examined. Two types of reliability have been examined. Two types of reliability have been tested first is the test of internal consistency which has been checked with composite reliability, secondly Indicator reliability has been measured with outer loadings. Further, convergent validity has been satisfied through (AVE) Average Variance Extracted in accordance with the article published by (Hair Jr., Matthews, Matthews, & Sarstedt., 2017). As shown in Table 5.1 all parameters exceed the recommended value of composite reliability i.e. 0.7 whereas the recommended value is given by

(Gefen, Straub, & Boudreau, 2000) and values of AVE are found to be above minimum value of 0.5 except Social Behavior which has been quoted in the research article by(Bagozzi & Yougae, 1988). Subsequently, a new method to check discriminant validity, Heterotrait- Monotrait ratio of correlations (HTMT) approach has been applied (Henseler, Hubona, & Ray, 2016). According to result of test it was found thatthe valuesof HTMT werebelowmaximumvalueof1.0forallparametersdepictedin table5.2.

Quality Criterion ***(Convergent Validity and Reliability)***
Table 5.1 Quality Criterion **(Convergent Validity and Reliability)**

	Cronbach's Alpha	**Composite Reliability**	**Average Variance Extracted (AVE)**
Learning Ability	0.774	0.846	0.524
Motivation	0.73	0.837	0.635
Organizational Culture	0.794	0.875	0.701
Personal Values	0.686	0.863	0.759
Social Behavior	0.741	0.822	0.41

HTMT ***Table***
Table 5.2 Correlation **Table**

	Learning Ability	**Motivation**	**Organizational Culture**	**Personal Values**	**Social Behavior**
Learning Ability					
Motivation	0.701				
Organizational Culture	0.256	0.438			
Personal Values	0.545	0.543	0.343		
Social Behavior	0.95	0.777	0.372	0.696	

Structural Equation Model- Multiple Regression

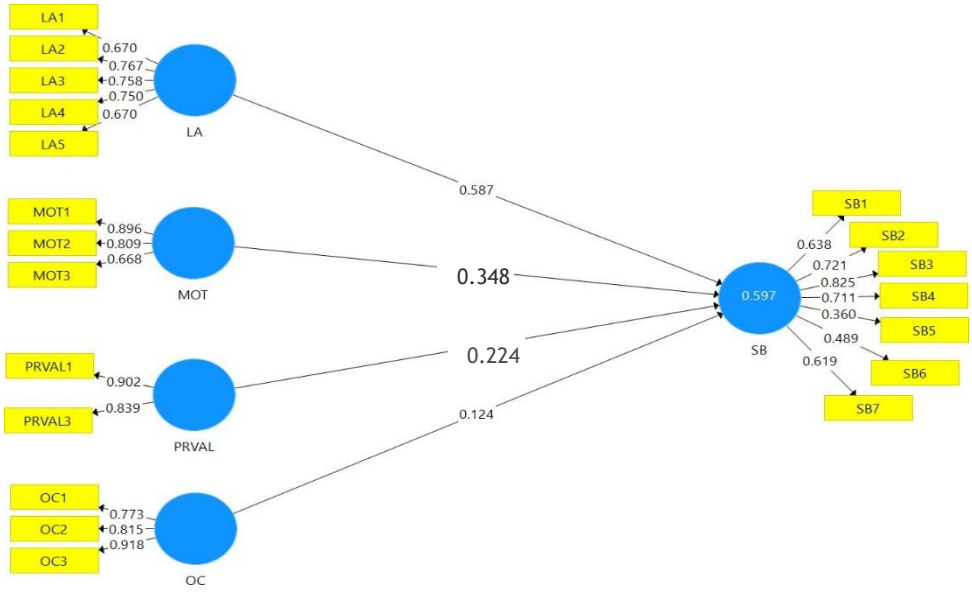

Figure 1: Multiple Regression Model using Smart PLS

The model shown in figure 1 shows the relationship between various independent variables and dependent variable. The various independent variables shown are Learning Ability, Motivation, Personal Values and Organizational Culture. The dependent variable is Social Behavior. The yellow boxes shown are the various indicators of the constructs asked in the questionnaire and the values nearby show the strength of the loadings. There are four path coefficient values obtained as there are four independent variables. The strength of the relationship of each independent variable with the dependent variable is shown using the path coefficient values. Finally, there is an R square value which represents the regression, i.e. percentage of change in dependent variable if the independent variable is changed. The regression value obtained here is 0.597, which means that the overall regression is moderately strong.Thehighestpathcoefficientvalueobtainedis0.587whichshowstherelationship between Learning Ability and Social Behavior. This means that Learning Ability has the strongest relationship with Social Behavior. The second highest path coefficient value obtained is 0.348 which shows the relationship between Motivation and Social Behavior. This means that Motivation also has a strong relationship with Social Behavior. The next highest path coefficient is 0.224 which shows the relationship between Personal Values and Social Behavior. This means that there is a strong relationship between Personal Values and Social Behavior. The remaining value is 0.124 which shows the relationship between Organizational Culture and Social Behavior. This means that there is not a comparatively stronger relationship between Organizational Culture and SocialBehavior.

Hypothesis Testing (Path Coefficients)

Table 6.1 Hypothesis **(Path Coefficients) Table**

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Value	P Values	Decision
Learning Ability -> Social Behavior	0.587	0.582	0.069	8.504	0.002	Reject
Motivation ->Social Behavior	0.348	0.352	0.085	2.932	0.023	Reject
Organizational Culture -> Social Behavior	0.224	0.224	0.063	5.986	0.067	Accept
PersonalValues ->Social Behavior	0.103	0.124	0.07	7.432	0.047	Reject

DISCUSSION AND RESULTS

After the research it was found out that the factors that influence the social behavior of aengineers are Learning Abilities, Personal Values, Organizational Culture and Motivation. The factors were shortlisted by referring to several researchers. Learning Ability is the ability of an individual wherein, he/she are competent enough to learn new things. The time a person decides to indulge himself in learning something, his/her behavior towards others changes. This is because the person sees things in different light. Motivation is a tool that encourages people to indulge themselves in certain things. In case of Social Behavior if a person is highly motivated to get himself/herself engaged in social affairs like talking to people, sharing ideas with them, etc. he/she will be more socially outward. Organizational Culture is related to Social Behavioris talked by several researchers who claim that having a positive, friendly, open, respectful Organizational Culture leads to a better social behavior of the person. Personal Values are the set of beliefs that a person holds for himself. The values that one has are influenced by the internal and external world both. In case of internal world, the person's experiences and emotions lead him/her to make a value system. It is only dependent on the person. Whereas, in case of external world, people like parents, family members, teachers, society, friends, acquaintance, etc. influence the values of an individual. The impact of factors affecting the Social Behavior of a person was found out by Partial Least Square (Structural Equation Modeling). From the Multiple Regression Model obtained in Smart PLS is can be inferred that the highest path coefficient value obtained is 0.587 which shows the relationship between Learning Ability and Social Behavior. This means that Learning Ability has the strongest relationship with Social Behavior. The second highest path coefficient value obtained is 0.348 which shows the relationship between Motivation and Social Behavior. This means that Motivation also has a strong relationship with Social Behavior. The next highest path coefficient is 0.224 which shows the relationship between Personal Values and Social Behavior. This means that there is a strong relationship between Personal Values and Social Behavior. The remaining value is 0.124 which shows the relationship

between Organizational Culture and Social Behavior. This means that there is not a comparatively stronger relationship between Organizational Culture and Social Behavior. Finally, there is an R square value which represents the regression that is the percentage of change in dependent variable if the independent variable is altered. The Regression value obtained here is 0.597, which means that the overall Regression is moderately strong. The correlation between the factors and Social Behavior were also checked. The results obtained were that all the constructs have a positive correlation with social behavior. It can also be seen that Learning Ability *(0.95)* and Motivation *(0.777)* have Strong Positive Correlation. Whereas, Personal Values *(0.696)* has a Moderate Positive Correlation with Social Behavior and Organizational Culture *(0.372)* has a weak positive correlation with Social Behavior. Apart from this various hypothesis were developed in order to check the positive/negative impact of these factors on Social Behavior. Upon testing it was found that Learning Ability, Motivation and Personal Values have a positive impact on Social Behavior. Whereas, Organizational Culture has a negative impact on Social Behavior.

CONCLUSION

Through findings of the research, it was found out that the factors that influence the social behavior of a person are Learning Abilities, Personal Values, Organizational Culture and Motivation. The factors wereshortlistedbyreferringtoseveralresearchers.Theimpactoffactorsaffectingthe Social Behavior of a person was found out by Partial Least Square (Structural Equation Modeling). From the Multiple Regression Model obtained in Smart PLS is can be inferred that Learning Ability, Motivation and Personal Values have a relationship with Social Behavior. Whereas, the relationship between Organizational Culture and Social Behavior is not very strong.

Managerial Implications

Social Behavior is significantly associated with the practices in manufacturing and service industry. Technology plays a vital role in influencing the relationship between Social Behavior and its various factors. Managers can use this research to help understand the Social Behavior of the employees.

Learning Ability as a factor of Social Behavior

From the study it was found out that Learning Ability is a factor of Social Behavior. So, the managers can create an environment where the employees experience new things and learn from them. The managers must create an environment where the employees share new information with each other so that Social Interactions between employees happen.

Motivation as a factor of Social Behavior

From the study it was found out that Motivation is a factor of Social Behavior. So, the managers can make use of extrinsic motivation by paying bonuses, appreciating the employees when they work in a proper way. As per the study, when an employee is motivated his social behavior also changes as he tends to get involved in boosting his performance to be better.

Personal Values as a factor of Social Behavior

From the study it was found out that Personal Values are a factor of Social Behavior. So, the managers must identify the values an employee holds and work according to his value system. If an employee's Value system does not allow him/her to work in a certain way which might be unethical for him but ethical for others, in such a situation manager should refrain from making the employee do that particular task.

REFERENCES

Alexander, R. D. (1974). The evolution of social behavior. Annual review of ecology and systematics, 5(1), 325-383.

Amabile, T. M. (1999). Changes in the work environment for creativity during downsizing. . Academy of Management journal, 42(6), 630-640.

Amabile, T. M. (2012). Componential theory of creativity.

Amabile, T. M. (2018). Creativity in Context: Update to the Social Psychology of Creativity.

Amabile, T. M. (1998). How to kill Creativity.

Arruda-Filho, E. J. (2010). Social behavior and brand devotion among iPhone innovators. . International journal of information management, 30(6), 475-480.

Bagga, T. (2012). A study on perception of various social networking sites with special reference to Delhi/NCR. ZENITH International Journal of Business Economics & Management Research 2, 10, 64-79.

Bagga, T., & Khanna, G. (2014). Dell's technical-support staff have the power to do more: Recruitment and training ensure quality customer service. Human Resource Management International Digest (22), 6, 7-9.

Bagozzi, R., & Yougae, Y. (1988). On the evaluation of structural equation Models. Journal of Academy of Marketing Science, 16 (Spring), 74-94.

Bates, J. L. (1992). An architecture for action, emotion, and social behavior. In European Workshop on Modelling Autonomous Agents in a Multi-Agent World (pp. 55-68). Springer, Berlin, Heidelberg.

Beghetto, R. A., & Kaufman, J. C. (2009). Intellectual estuaries: Connecting learning and creativity in programs of advanced academics. Journal of Advanced Academics, 20(2) , 296-324.

Bellanti, C. J. (2000). Disentangling the impact of low cognitive ability and inattention on social behavior and peer relationships. . Journal of Clinical Child Psychology, 29(1), 66-75.

Bonnardel, N. &. (2010). The impact of technology on creativity in design: an enhancement?. Creativity and innovation management, 19(2), 180-191.

Born, G. (2005). On musical mediation: Ontology, technology and creativity. . Twentieth-century music, 2(1), 7-36.

Brown, W. H. (1994). Strategies and tactics for promoting generalization and maintenance of young children's social behavior. . Research in Developmental Disabilities, 15(2), 99-118.

Candy, L. &. (2000). Creativity enhancement with emerging technologies. . Communications of the ACM, 43(8), 63-65.

Casper, M. J. (2010). Medical sociology and technology: Critical engagements. . Journal of Health and Social Behavior, 51(1_suppl), S120-S132.

Cesario, J. P. (2006). Automatic social behavior as motivated preparation to interact. Journal of personality and social psychology, 90(6), 893.

Choi, J. N. (2007). Change-oriented organizational citizenship behavior: effects of work environment characteristics and intervening psychological processes. . Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Org.

Cooper, R. B. (2000). Information technology development creativity: A case study of attempted radical change. .Mis Quarterly, 245-276.

Council., N. R. (2003). Beyond productivity: Information technology, innovation, and creativity. . National Academies Press.

Dankert, H. W. (2009). Automated monitoring and analysis of social behavior in Drosophila. Nature methods, 6(4), 297.

Dewett, T. (2003). Understanding the relationship between information technology and creativity in organizations. . Creativity Research Journal, 15(2-3), 167-182.

Eberhard, M. J. (1975). The evolution of social behavior by kin selection. The Quarterly Review of Biology, 50(1), 1-33.

Edwards, S. M. (2001). The technology paradox: Efficiency versus creativity. Creativity Research Journal, 13(2), 221-228.

Gibson, K. R. (1993). Tool use, language and social behavior in relationship to information processing capacities. . Tools, language and cognition in human evolution, 251-269.

Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural equation modeling and regression: Guidelines for research practice. Communications of the association for information systems, 4(1), 17-41.

Guthrie, J. L. (2016). Taking the liberty: toward a theory of copyright and creativity. . MEIEA Journal, 16(1), 97.

Hayward, P. (. (1990). Culture, technology & creativity in the late twentieth century. . Indiana University Press.

Hair Jr., J. F., Matthews, L. M., Matthews, R. L., & Sarstedt., M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. International Journal of Multivariate Data Analysis, 1(2), 107-123.

Henseler, J., Hubona, G., & Ray, P. A. (2016). Using PLS path modeling in new technology research: updated guidelines. Industrial management & data systems, 2-20.

Hsu, C. L. (2008). Acceptance of blog usage: The roles of technology acceptance, social influence and knowledge sharing motivation. .Information& management, 45(1), 65-74.

Jaeger, P. T. (2010). Information worlds: Behavior, technology, and social context in the age of the Internet. Routledge.

Kim, E. S. (2013). Social robots as embedded reinforcers of social behavior in children with autism.

Journal of autism and developmental disorders, 43(5), 1038-1049.

Kipnis, D. (1994). Accounting for the use of behavior technologies in social psychology. . American Psychologist, 49(3), 165.

Koh, H. Y. (2008). Deficits in social behavior and sensorimotor gating in mice lacking phospholipase Cβ1. Genes, Brain and Behavior, 7(1), 120-128.

Lin, C. P. (2003). Modeling information ethics: The joint moderating role of locus of control and job insecurity. Journal of Business Ethics, 48(4), 335-346.

Mathieson, K. (1991). Predicting user intentions: comparing the technology acceptance model with the theory of planned behavior. Information systems research, 2(3), 173-191.

McLuhan, M. F. (1968). War and peace in the global village (Vol. 127). New York: Bantam Books.

Middlemist, R. D. (1981). Technology as a moderator of the relationship between perceived work environment and subunit effectiveness. . Human Relations, 34(6), 517-532.

Miller, D. L.-M. (2013). Filling the institutional void: The social behavior and performance of family versus non-family technology firms in emerging markets. . In Handbook of Research on Family Business, Second Edition.

Mishra, P. &. (2013). A NEW approach to defining and measuring creativity: Rethinking technology & creativity in the 21st century. .TechTrends, 57(5), 10.

Mishra, P. (2012). Rethinking technology & creativity in the 21st century: Crayons are the future.TechTrends, 56(5), 13.

Palfrey, J. G. (2009). Youth, creativity, and copyright in the digital age. . Berkman Center Research Publication, (2009-05).

Palmer, J. A. (2002). Evolutionary psychology: The ultimate origins of human behavior. Allyn & Bacon.

Patrick, C. (1935). Creative thought in poets. Archives of Psychology,26 , 1-74.

Pirola-Merlo, A. &. (2004). The relationship between individual creativity and team creativity: Aggregating across people and time. . Journal of Organizational behavior, 25(2), 235-257.

Rehg, J. A. (2013). Decoding children's social behavior. . In Proceedings of the IEEE conference on computer vision and pattern recognition (pp. 3414-3421).

Roccas, S. &. (2010). Personal values and behavior: Taking the cultural context into account. . Social and Personality Psychology Compass, 4(1), 30-41.

Runco, M. A., & Jaeger, G. J. (2012). The Standard Definition of Creativity. Creativity Research Journal ,24 (1), 92-96.

Shalley, C. E. (2017). Creativity and the management of technology: Balancing creativity and standardization. Production and Operations Management, 26(4), 605-616.

Simonton, D. K. (2000). Creative development as acquired expertise: Theoretical issues and an empirical test. Developmental Review

Singh, A., Vishnoi, S. K., & Bagga, T. (2018). A Study on Customer Preferences towards Travel and Tourism Sector and Their Services. International Journal of Research in Advent Technology, Vol.6, No.12, 3847-3854.

Skågeby, J. (2010). Gift-giving as a conceptual framework: framing social behavior in online networks. Journal of Information Technology, 25(2), 170-177.

Stein, M. I. (1953). Creativity and culture. Journal of Psychology,36 ,31-322. Sternberg,

Srivastava, S., & Bagga, T. (2014). A Comparative Study on the Usage of HRIS in the IT/ITES, Services, and Manufacturing Sectors in the Indian Scenario. Prabandhan: Indian Journal of Management, 21-36.

Tripathi, A., Bagga, T., & Aggarwal, R. K. (2020). Strategic Impact of Business Intelligence: A Review of Literature. Prabandhan: Indian Journal of Management, 35-48.

Tarhini, A. H. (2014). Measuring the moderating effect of gender and age on e-learning acceptance in England: A structural equation modeling approach for an extended technology acceptance model. Journal of Educational Computing Research.

Van Tilburg, W. A. (2015). The mnemonic muse: Nostalgia fosters creativity through openness to experience.Journal of Experimental Social Psychology, 59, 1-7.

Venkatesh, V. &. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. MIS quarterly, 115-139.

Vishnoi, S. K., & Bagga, T. (2020). Marketing Intelligence: Antecedents and Consequences. 3rd International Conference On Innovative Computing And Communication (pp. 1-9). New Delhi: Elsevier.

Vishnoi, S. K., Bagga, T., Sharma, A., & Wani, S. N. (2018). Artificial Intelligence enabled marketing solutions : A Review. Indian Journal Of Economics & Business, 167-177.

Vishnoi, S. K., Tripathi, A., & Bagga, T. (2019). Intelligent Automation, Planning & Implementation: A Review of Constraints. International Journal on Emerging Technologies, 174-178.

Warner, T. (2017). Pop Music-Technology and Creativity: Trevor Horn and the Digital Revolution. Routledge.

Yang, F. X. (2017). Effects of restaurant satisfaction and knowledge sharing motivation on e-WOM intentions: the moderating role of technology acceptance factors. Journal of Hospitality & Tourism research, 41(1), 93-127.