

Technical Analysis and Overview of the Concepts of Organizational studies with special Emphasis on Behavior, Theory, and Ecology

Kamal Nain Chopra
Maharaja Agrasen Institute of Technology and GGSIP University

The studies related to the Concepts of Organizational studies have been reviewed and discussed. Special emphasis has been placed on Behavior, Theory, and Ecology, of Organizational Studies. The paper is expected to be useful to the new entrants in the field and also the senior organizational experts and advisors in the firms. The Technique of Simulation for optimization of learning in Organization has been discussed.

INTRODUCTION

Organizational studies refer to the examination of the ways and methodology that the individuals like managers engage themselves in forming the organizational structures, processes, and practices and also, shape social relations and create institutions, which in turn, finally influence people. In fact, the organizational studies are related to the different fields dealing with the different facets of the organizations. It is important to understand that most of the approaches are functionalist, though some critical research also provides other frame for exploring the field. The most important fundamental in studying the management is the organizational change. The most important topics of such studies are mainly the Organizational behavior, the Organizational ecology, the Organizational theory, the Organizational culture, the Organizational psychology, and the Organizational learning. Organizational behavior is related to the study of (i) human behavior in the organizational settings, (ii) the interface between human behavior and the organization, and (iii) the organization. The research in the Organizational behavior is carried out mainly on : the individuals in organizations (micro-level), the work groups (meso-level), and most importantly the manner in which the organizations behave (macro-level). Also, the Research methods used are of three types: Quantitative methods, Computer simulation, and Qualitative methods.

Experts like Chester Barnard are of the opinion that the behavior of the individuals is quite different in their organizational role from that while acting separately from the organization. In fact, the Organizational behavior researchers study the behavior of individuals mainly in their organizational roles. Importantly, the main important goal of the organizational behavior is to revitalize organizational theory and develop a better conceptualization of organizational life. Experts like Miner (2006) are of the opinion that there is a certain arbitrariness in identifying a point at which the organizational behavior is considered to be established as a certain discipline, which implies that it could have emerged in certain related decades; and that the industrial psychology division of the American Psychological Association added the word - "organizational", much after the organizational behavior had firmly come into existence. It may be

noted that though there are similarities and differences between the two disciplines, namely organizational behavior and organizational psychology. still there is a lot of confusion in finding the difference between the two.

Interestingly, organizational behavior is a multi-disciplinary field, and hence is influenced by changes and developments taking place in many related disciplines including Sociology, industrial/organizational psychology, and Economics.

The Industrial Revolution took place towards the end of 18th century, with the advent of new technologies resulting in the adoption of novel manufacturing techniques along with the increased mechanization. According to Max Weber the Industrial Revolution's focus on efficiency resulted in the containment of the worker feeling somewhat in a sort of prison and also doing away with his individuality. In addition to this, the considerable social and cultural changes seen in this Industrial Revolution resulted in the formation of new forms of organization. By analyzing one such organization, Weber concluded that bureaucracy was just an organization resting on rational-legal principles and maximized technical efficiency.

Organizational Behaviors (OBs)

The commonly established theories of organizational behavior (OB) have been given by experts like Henri Fayol, Chester Barnard, and Mary Parker Follet, and interestingly, these are based on their experience to develop a model of effective organizational management, and all these theories are focused on human behavior and motivation. Another management consultant, Frederick Taylor, a 19th-century engineer, applied an approach known as the scientific management, and advocated for maximizing task efficiency through the scientific method, which was further refined by Lillian and Frank Gilbreth, who could further improve worker efficiency by utilizing time and motion study. In the beginning of 20th century, automobile giant Henry Ford, gave the method relying on the standardization of production by using assembly lines, which helped in allowing unskilled workers to produce complex products efficiently. This was followed by the advent of the model of Hawthorne Studies by Hawthorne Works Western Electric factory, which in beginning followed the traditional scientific method, but at the same time, investigated whether workers would be able to increase production with higher or lower lighting levels. An interesting observation was made that whereas the lighting levels, had no effect, the productivity was found to increase when workers were being studied, but returned to the original level when the studies ended. Another important observation was made by Elton Mayo on the basis of some experiments, that the job performance was strongly correlated to social relationships and job content.

Simon, along with Chester Barnard, introduced a concept of decision-making, and argued that people decide differently inside an organization as compared to outside of an organization. Contrary to the classical economic theories assuming that people are rational decision-makers, Simon argued that cognition is limited because of bounded rationality e.g. decision-makers often employ satisficing (referred to as a phenomenon/strategy that strives for satisfactory decision making, aimed at taking decisions that are okay enough to tackle a situation, but not the best possible decisions), the process of utilizing the first marginally acceptable solution rather than the most optimal solution. It was noticed that in the 1960s and 1970s, the field of organizational decision-making, became more quantitative and resource dependent, which led to the establishment of contingency theory, institutional theory, and organizational ecology. Soon after this, cultural explanations of organizations and organizational change became areas of study, and combined with fields like anthropology, psychology and sociology.

Presently, research efforts and teaching in the field of organizational behavior are mainly in the university management departments, in colleges of business, and also in industrial and organizational psychology graduate programs. A lot of emphasis has been on Anthropology, which has resulted in the idea that we can understand firms as communities, based on the concepts like organizational culture, organizational rituals, and symbolic acts. The concept has become broader with the inclusion of leadership studies and ethics, as they are important in an organization. Research methods used are: (i) Statistical methods including correlation, analysis of variance, meta-analysis, multilevel modeling, multiple regression, structural equation modeling, and time series analysis;(ii) Computer simulation,

which is a prominent method in organizational studies, and is used to understand how organizations or firms operate, or sometimes even the individual behavior at a micro-level; and (iii) Qualitative methods consisting of a number of methods of inquiry not involving the quantification of variables. These methods have a wide range -from the content analysis of interviews or written material to written narratives of observations. During the last one and a half decades, various researchers have carried out many studies (Demerouti , Bakker, Nachreiner . and Schaufeli, 2001; Ashkanasy N., Härtel and Daus, 2002; Michel, Shoda , and Smith, 2004; Rayner and Keashly, 2005; Rospenda and Richman, 2005; Taylor and Hansen, 2005; Spector and Fox, 2005; Miner, 2006; Balzer and Gillespie, 2007; Jex and Britt, 2008; Baron and Greenberg, 2008; Robbins, 2009; Wagner and Hollenbeck. 2010; Brewerton and Millward, 2010; Hughes ,Clegg ,Robinson and Crowder, 2012; Crowder,Robinson , Hughes and Sim, 2012; Organizational Behavior Guide for Consultants. 2018; Davenport , Long and Beers, 1998; and Gold., Malhotra and Albert ,, 2001;) to discuss various aspects connected with this topic. There are various aspects of Organizational behavior, which are discussed below:

Decision-Making

Mostly, the OB researchers focus on decision making in various forms like: (i) how decisions are ordinarily made , termed as normative decision-making, (ii) how thinkers are able to reach a particular judgment termed as descriptive decision-making, and (iii) how to

Employee Mistreatment

There are several types of mistreatment that employees endure in organizations like Abusive supervision, bullying, incivility, and widely prevailing sexual harassment. The abusive supervision refers to the extent to which a supervisor engages in a pattern of behavior, which in a way harms subordinates. The workplace bullying involves a sort of pattern of harmful behaviors, which are directed towards an individual. Obviously, such behavior is termed bullying, if the individual or individuals involved in harming have more power than the sufferer. The incivility at the workplace refers to the low-intensity discourteous and rude behavior, characterized by a not so clear intention of harming, and violating the social norms suitable for behavior at workplace. The sexual harassment is behavior which in a way denigrates an individual based on his or her gender, and is thus creating an offensive workplace , interfering with job performance of the individual.

Attitudes and Emotions Related to the Job

One of the important ingredients of the organizational behavior is related to the attitudes and feelings of the employees like job satisfaction, organizational commitment, and emotional labor. In general, the job satisfaction shows the feelings of an employee about his or her job, or even the facets of the job like pay or supervision. Organizational commitment is an index of the extent to which employees have a feeling of attachment to their organization. Emotional labor is about the requirement that an employee displays certain emotions, like smiling at customers, irrespective of the employee not required to display any feeling of the emotion.

LEADERSHIP THEORIES

Various theories have been propounded on leadership. It is interesting to note that while the early theories laid emphasis on the characteristics of leaders, the later theories dealt with the leader behavior, and also the conditions under which the leaders can be effective. One of the important theories has been the contingency theory, which is based on the consideration and initiating the structure model. Some other theories are: leader-member exchange or LMX theory, path-goal theory, and transformational leadership theory. It has to be appreciated that the Contingency theory shows that the good leadership depends on the characteristics of the leader and the situation. The dimensions of the leadership are known as consideration and initiating structure. Interestingly, the LMX theory is mainly concerned with the exchange relationships between individual supervisor-subordinate pairs. On the other hand, the Path-goal

theory is a contingency theory which links the appropriate leader style to organizational conditions, and also the subordinate personality. The Transformational leadership theory focuses on the concerns of the behaviors that the leaders are engaged in, which inspire high levels of motivation and performance in followers.

Roles of Managers

Based on the observations of Henry Mintzberg, and graduate students at MIT, there are three categories of managerial roles: interpersonal roles; decisional roles; and informational roles. According to Baron and Greenberg (Baron and Greenberg, 2008), the motivation involves the set of processes that arouse, direct, and maintain human behavior toward attaining a particular objective of some goal. Various important theories of motivation relevant to OB, are: equity theory, expectancy theory, Maslow's hierarchy of needs, incentive theory, organizational justice theory, and Herzberg's two-factor theory, which deal with the slightly different facets of motivation.

National Culture based on Hofstede's Cultural Dimensions Theory

National culture is considered to strongly affect the behavior of individuals in organizations, which in fact, is exemplified by Hofstede's cultural dimensions theory, formed after surveying a large number of cultures and identifying six dimensions of national cultures that influence the behavior of individuals in organizations (Geert, Hofstede and Minkov, 2010), which are: power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, long-term orientation vs. short term orientation, and indulgence vs. restraint. The combined effect of all these is reflected in National culture.

Organizational Characteristics

Important Organizational characteristics are: (i) Organizational citizenship behavior, and (ii) Organizational culture. The Organizational citizenship behavior refers to the behavior going beyond assigned tasks, and strongly contributes to the well-being of organizations. The Organizational culture deals with the values and behaviors, which are commonly observed in an organization. Researchers in this field assume that the organizations can be characterized by cultural dimensions like beliefs, values, rituals, and symbols. They have been able to develop the models for understanding an organization's culture or its typologies. Edgar Schein's model for understanding organizational culture is based on identifying three levels of organizational culture: (i) artifacts and behaviors, (ii) espoused values, and (iii) shared basic assumptions. It is important to note that the specific cultures are related to organizational performance and effectiveness. The employee performance depends on the Personality, which is concerned with the consistent patterns of behavior, cognition, and emotion in individuals. Another parameter affecting the employee performance is the Occupational stress, which is characterized as an imbalance between job demands requiring mental or physical effort and resources helping to manage the demands.

Chester Barnard's view is that the individuals behave differently when acting in their work role than while acting in roles away from their work role. It is now well recognized that the work-family conflict occurs when the demands of family and work roles are incompatible, and especially in case, the demands of anyone role interfere with the discharge of the demands of the other.

Organization Theory

Organization theory deals with explaining the workings of an organization as a whole or a group of many organizations. The organizational theory focuses on understanding the structure and processes of organizations, and the way of interaction of organizations with each other and also with the larger society. Another related parameter is the Bureaucracy, which according to Max Weber involves the application of rational-legal authority to the organization of work, and thus making it the most technically efficient and important form of organization. As suggested by Max Weber, many principles of bureaucratic organization including: organizational hierarchy, management by rules, and organization by functional specialty, follow the same rules and structures to all members of the organization; and, all organizations

can be understood in terms of bureaucracy, and the organizational failures as a result of insufficient application of bureaucratic principles.

Economic Theories of Organization

Economic theories of organization are mainly of three types: Theory of the firm, Theory of transaction cost economics, and Agency theory.

Theories Related to Organizational Structures and Dynamics

The main theories related to organizational structures and dynamics are: complexity theory, French and Raven's five bases of power, hybrid organization theory, informal organizational theory, resource dependence theory, and Mintzberg's organigraph.

Systems Theory

It is important to note that the systems framework is strongly related to the organizational theory. Alexander Bogdanov developed his tectology, a theory which is widely considered a precursor of Bertalanffy's general systems theory. As can be understood, the aim of general systems theory is to model human organizations. Another social psychologist, Kurt Lewin, developed a systems perspective with regard to organizations. He gave the term -systems of ideology, which is partly based on his frustration with behaviorist psychology.

ORGANIZATIONAL ECOLOGY

Organizational ecology is a theoretical and empirical approach in the social sciences which is considered a sub-field of organizational studies. Interestingly, organizational ecology uses the insights from various fields like biology, economics, and sociology, and employs statistical analysis for understanding the conditions under which organizations take birth, evolve, and decay. This topic is divided into three levels: the community, the population, and the organization. Whereas the community level is the functionally integrated system of interacting populations, the population level is a group of organizations engaged in similar activities, and the organization level focuses on the individual organizations. The term organizational ecology in research is more accurately referred to as population ecology.

Organizational ecology is mainly based on focusing on the manner in which the social forces affect the (i) rates of creation of new organizational forms, (ii) rates of closure of organizations and organizational forms, and (iii) the rates of change in organizational forms. Another important aspect of Organizational ecology is regarding the Theories about inertia and change, which are fundamental to its research program, and need a better understanding of the broader changes taking place in the organization. It is to be noted that because of the limits of firm-level adaptation, most of these broader changes result from the entry and selective replacement of organizations. This is the reason that the managers of the organization devote considerable effort on understanding the opening and closure rates of organizations. In fact, the Organizational ecology models are widely applied concepts from evolutionary theory to the study of populations of organizations. In fact, the organizations are selected on the basis of their being fit with their operating environment.

Scientific Management

Scientific management is an approach to management based on the principles of engineering, which focuses on the incentives and other practices empirically shown to improve productivity. Chopra (Chopra,2014; Chopra2015; Chopra 2017; Chopra 2017; Chopra 2017; Chopra 2017; and Chopra 2018) has described and technically discussed various techniques being followed by the managers for improving the performance and profit of the organization.

SIMULATION FOR OPTIMIZATION OF LEARNING IN ORGANIZATION

It is interesting to note that simulation is used not to just focus on declarative learning. It has more important purpose for base level learning, for which B_i is most important and commonly used formula of cognitive architecture $ACT-R$. Following the approach (Helmhout, and Jorna, http://www.acis.nl/researchdocs/EGOS_conference.), the Equation for an estimation of the odds of all presentations of a group, that is being used is given as:

$$B_i = \ln \left(\sum_{j=1}^n T_j^{-d} \right) + \beta \quad (1)$$

where T_j denotes the time-difference ($T_j = T_{now} - T_{presentation}$) when the group is represented in memory, d denotes the decay rate, and β denotes the initial activation.

It is to be noted that the base-level learning defines a logarithmic power function, which approximates the Power Law of Forgetting, when no chunks are presented and the Power Law of Learning when many consecutive chunks are presented.

The manager of the organization has to note that the parameters of the base-level learning equation can assign different rates of degradation of each individual or each group, and thus allows the individual to forget when no representations of a group take place, and also enables it to remember when representations take place.

As is expected, the declarative groups are selected on the basis of matching and highest activation, selection being based on the expected gain or utility. If the Manager is involved in solving a goal, the individuals can be asked to solve the problem. But, as $ACT-R$ is a serial processor, the procedure has no choice other than selecting one with the highest expected gain or utility.

In this approach, the utility of a procedure is defined as:

$$U = (P * G - C + \sigma) \quad (2)$$

where, P denotes learning probability, G denotes the goal value i.e. the importance attached by $ACT-R$ to achieve a particular goal, C denotes the cost of using the procedures, and σ denotes the stochastic noise variable.

It is clear that it is possible to assign a different G to each procedure, which influences the $ACT-R$ engine for choosing a specific procedure. However, in general, it is customary to assign the same G to all procedures. in most of the $ACT-R$ simulations.

In fact, the probability P of learning is a factor of two sub-probabilities: q , the probability of the successful procedure, and r , the probability of fulfilling the objective of the goal in case the procedure is successful. P is defined as:

$$P = q * r \quad (3)$$

which is the Probability of Learning Equation.

Also, Cost C denotes the amount of time required for the completion of the task with the procedure. It may be noted that the noise σ has to be added to the utility for creating the non-deterministic behavior, and not with deterministic behavior, in which case, the simulations of $ACT-R$ are not in a position to follow any other procedure having similar parameters. It is important to understand the procedure for learning parameters q and r , since they have strong impact on the behavior in the

simulation procedure. Another important aspect of learning connected with the procedure is that it is of two types: (i) procedural symbolic learning, and (ii) procedural sub-symbolic learning. In the first type, *ACT – R* distinguishes between specialization and generalization, in the sense that the specialization is used for often recurring problems and becoming routine and generalized, which is used in analogy problems. Surprisingly, *ACT – R* has no stable and clear solution for the problem of this type of procedural learning. In fact, the procedural sub-symbolic learning is more prominently used on such studies. In this technique, the parameters of probability-*Q* and *r* describe the success ratio of the use of the procedure, and reflect the frequency and occurrence of successes and failures of a production. Obviously, the parameter *Q* is the success-ratio of directly completing the procedure; which in fact keeps record of the most recent successful execution of the condition and action aspects of a procedure. The parameter *r* gives the computed success-ratio in the achievements of completing an objective of a goal, after solving all the sub goals and after achieving and popping the current goal level. In other words, all goals that follow the current goal have to be fulfilled successfully to accomplish the current goal. The learning probability is defined as:

$$q, r = \frac{\text{Successes}}{(\text{Successes} + \text{Failures})} = \frac{S}{(S + F)} \quad (4)$$

which makes it clear that in the beginning, either $S \geq 1$ or $F \Rightarrow 1$. By default initialization of the procedural parameters, *S* is given a value of 1 and *F* a value of 0, which is based on the optimistic view of the success of the procedure being followed. It has to be carefully noted that so far, the simulation treatment has not considered any time component, which implies that the events and efforts in the past are equally weighted as in case of those experienced presently. However, in general the organizers are observed to be more aware of the impact of the present events and experiences than those of the past. Therefore, *ACT – R* is modified by using the functions to discount the impact of the past experiences by incorporating a power-decaying function, which is similar to the base-level learning equation. The modified formula for discounting successes and failures is given by:

$$\text{Successes vs Failures} = \sum_{j=1}^m T_j^{-d} \quad (5)$$

where *m* denotes the number of successes or failures, T_j denotes the time difference, and *d* denotes the success decay rate. The organizer uses this formula to give different decay rates for successes and failures. Hence, the manager has to improve the performance of the organization by optimizing various parameters, for which his experience is very important. For this work, his experience of interaction with the employees in the past, and his understanding of the market trends play an important role. In some complicated cases, use of software is also required, which is now commercially available.

However, it is just possible that in certain cases, a sudden unforeseen event may take place, which may affect this situation, Eqn.(5) may be then modified as given below:

$$\text{Successes vs Failures} = \sum_{j=1}^m T_j^{-d} - \phi \quad (6)$$

where ϕ denotes the effect of the sudden unforeseen event.

It is important to note that in certain cases, it is possible to extend this analysis by including the individual experiences and memory of past experiences, and using a simple form of learning, based on the utility function of $ACT - R$ given as:

$$Utility = \left\{ \frac{(1 + S)}{(1 + S + F)} \right\} \quad (7)$$

where each employee remembers his present score and adapts his strategy in the firm from time to time. It is obvious that at $T=0$, the individual has no preferences and hence makes the selection based on his experience or even randomly. However, in the $ACT - R$ simulation, the utility computation is quite complicated, and Noise has to be added to compensate for the variance in decision making, and is given as:

$$Utility = \left\{ \frac{(1 + S)}{(1 + S + F)} \right\} + Noise \quad (8)$$

In addition, in the simulation experiment, the individuals are provided with an equal personal construct, which means that the initialization parameters of the employees are equal; implying that they have equal decay rates, equal utility-preferences, equal motivation value to solve the goals, and equal procedural, declarative memory and noise. However, if they have different values of these parameters, then the weighted average is taken in the computation.

CONCLUDING REMARKS

The managers employed in improving the performance and profit of the organization have to be well conversant with the human factors of its employees, and also the scientific techniques, especially the Simulation for optimization of learning in Organization. In this effort, the experience of the manager in this organization and also similar effort in other organizations, and the time spent in these organizations play a crucial role. In this simulation approach, when employees choose the same strategy, and also start to self-enforce that particular strategy, and show no interest in any opportunity for any other strategy, they are seen to pass successfully. It has to be understood and appreciated that the Simulation-Based Optimization: Parametric Optimization Techniques and Reinforcement Learning introduce the newly evolving area of static and dynamic simulation-based optimization e.g. the model-free optimization techniques especially designed for those discrete-event, and stochastic systems, which can be simulated but whose analytical models are not easy to find in closed mathematical forms. Harrison Lin, Carroll and Carley, (Harrison Lin, Carroll and Carley, 2007) have stated that the role of simulation, at present, is not well understood by most of the management researchers. It has been explained that Simulation is a legitimate, disciplined, and powerful approach to scientific investigation, with the potential to make significant contributions to management theory. Another important point to be understood is that properly used and considered in appropriate perspective; computer simulation is considered a useful theoretical tool, which opens up new research avenues. In view of this, the computer simulations provide a sample of a future direction in management research, and it is hoped that many samples in future management research will be generated by computer simulations. This, it can be safely concluded that this evolving field has tremendous role to play in the future scientific management research in the organizations.

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REFERENCES

- Ashkanasy N. M., Härtel C. E. J., and Daus, C. S. (2002) Diversity and emotion: The new frontiers in organizational behavior research". *Journal of Management*. 28 307–338.
- Balzer W. K. and Gillespie J. Z. , (2007) Job satisfaction. In Rogelberg, S. G. (Ed.). *Encyclopedia of industrial and organizational psychology* Vol. 1 (406-413. Thousand Oaks, CA: Sage.
- Baron Robert A. and Greenberg Jerald, (2008) *Behavior in organizations – 9th edition*. Pearson Education Inc., New Jersey 248.
- Brewerton P.M., and Millward L.J., (2010) *Organizational research methods: A guide for students and researchers* Thousand Oaks, CA: Sage.
- Chopra Kamal Nain, (2014) Modeling and Technical Analysis of Electronics Commerce and Predictive Analytics, *Journal of Internet Banking and Commerce, Ottawa, Canada*, 19, No.2. Aug. Issue PP 1-10.
- Chopra Kamal Nain, (2015) Mathematical Modeling on “Entrepreneurship Outperforming Innovation” for Efficient Performance of the Industry, *AIMA Journal of Management and Research (AJMR)* 9 1-10.
- Chopra Kamal Nain, (2017), Analysis of the Mathematical Modeling and Simulation of Advanced Marketing in Commerce, *Journal of Internet Banking and Commerce, Ottawa, Canada*, 22 No.3 PP 1-9.
- Chopra Kamal Nain, (2017), Theoretical Analysis and Qualitative Review of the Mathematical Modeling on Management of Resources in Commerce, *Journal of Internet Banking and Commerce, Ottawa, Canada*, 22No. 3 , 22: 276.
- Chopra Kamal Nain, (2017), Analysis of the Technique of Minimization of the Uncertainties in Business for the Optimum Performance of a Firm, *Singaporean Journal of BuSineSS economicS and management StudieS* 5 No. 7, 35-44.
- Chopra Kamal Nain, (2017) Modeling and Documentation of Business Plan by Optimization of the Administration’s Function, Process and Behaviour, *Singaporean Journal of BuSineSS economicS and management StudieS* 5, No. 6, 1-7.
- Chopra Kamal Nain, (2018) Technical Overview of the Concepts of Finance Studies and the Methodology of Optimizing the Financial Resources of a Firm, *International Journal of Accounting and Finance Studies*, Los Angeles, CA, USA (In Press).
- Crowder, R. M., Robinson M. A., Hughes, H. P. N., and Sim, Y. W., (2012) The development of an agent-based modeling framework for simulating engineering team work. *IEEE Transactions on Systems, Man, and Cybernetics – Part A: Systems and Humans*. 42(1425–1439.
- Davenport Thomas H. , Long D. W. De and Beers Michael C. , (1998) Successful Knowledge Management Projects, *Sloan Management Rreview* 2(2):43.
- Demerouti E., Bakker A. B., Nachreiner F., and Schaufeli W. B., (2001) *The job demands-resources model of burnout*. *Journal of Applied Psychology*. 86 499–512
- Geert, Hofstede, Hofstede Gert Jan and Minkov Michael. *Cultures and Organizations: Software of the Mind*, 3rd ed. New York: McGraw-Hill. 2010.
- Gold Andrew H., Malhotra Arvind and Albert H. Segars, (2001) Knowledge Management: An Organizational Capabilities Perspective, *Journal of Management Information Systems* 18(1):185-214.

- Harrison J. Richard, Lin Zhiang , Carroll Glenn R. , and Carley Kathleen M., (2007) Mutation Modeling in Organizational and Management Research, *Academy of Management Review*, 32 (1229–1245).
- How to work with a demanding client – *Organizational Behavior Guide for Consultants. Organizational Behavior Guide for Consultants*. 2018-02-06. Retrieved 2018-02-09.
- Helmhout Martin, Henk Gazendam W.M., and Jorna René J., Emergence of Social Constructs and Organizational Behavior A cognitive learning approach
http://www.acis.nl/researchdocs/EGOS_conference.pdf.
- Hughes H. P. N., Clegg C. W., Robinson M. A., and Crowder, R. M., (2012). Agent-based modelling and simulation: The potential contribution to organizational psychology. *Journal of Occupational and Organizational Psychology*, 85 (487–502).
- Jex S. and Britt T. (2008). *Organizational psychology: A scientist-practitioner approach*. 2nd ed. New York: Wiley.
- Michel W., Shoda Y., and Smith R. E., (2004). *Introduction to personality: Toward an integration* New York: Wiley
- Miner J.B., *Organizational behavior*, Vol. 3: (2006). Historical origins, theoretical foundations, and the future. Armonk, NY and London: Sharpe M.E..
- Levy, P. E. (2006). *Industrial/organizational psychology: Understanding the workplace*. Boston: Houghton Mifflin.
- Rayner C., and Keashly L., (2005) *Bullying at Work: A Perspective From Britain and North America*. In S. Fox and P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* 271-296. Washington, DC, US: American Psychological Association.
- Robbins, S. P. (2009). *Organizational behaviour*. Cape Town, Pearson.
- Rospenda K. M., and Richman J. A., (2005) Harassment and discrimination. In J. Barling, E. K. Kelloway and M. R. Frone (Eds.), *Handbook of work stress* 149-188). Thousand Oaks, CA: Sage.
- Spector P. E., and Fox S., (2005). The Stressor-Emotion Model of Counterproductive Work Behavior. In S. Fox, P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* 151-174, Washington, DC, US: American Psychological Association. .
- Taylor S. and Hansen H., (2005) Finding form: Looking at the field of organizational aesthetics drawing on theories and methods from the humanities, including theater, literature, music, and art. *Journal of Management Studies*, 42 1211–1231.
- Wagner J. A., and Hollenbeck J. R., (2010) *Organizational behavior: Securing competitive advantage*. New York: Routledge.