

Synthetic Literature review of Organizational Forgetting

Jamshid Ali Turi

Faculty of Industrial Management,
University Malaysia Pahang, Malaysia

Dr. Fatimah Binti Mahmud

Faculty of Industrial Management,
University Malaysia Pahang, Malaysia

Hira Toheed

Department of Management Sciences,
Bahria University Islamabad, Pakistan

Dr. Shahryar Sorooshian

Faculty of Industrial Management,
University Malaysia Pahang, Malaysia

ABSTRACT

This paper covers comprehensive literature analysis on organizational forgetting. Work on organizational forgetting was synthesised in systematic and chronological order. Forgetting theories in organizational context have been widely discussed to comprehend forgetting in organizational context. Cognitive, social and behavioural factors of forgetting have been also cited in organization contextual application. All the theories, prevailing context and factors indicate, as evident from content analysis, have greater impact on organizational learning.

Keywords: Organizational Forgetting; Cognitive forgetting; Social Forgetting; Behavioural Forgetting

INTRODUCTION TO ORGANIZATIONAL FORGETTING

Organizational forgetting or unlearning is defined as the process through which individual/organization discard knowledge or acquiring information that leads to subtract something, to make way for new responses and mental mapping (Alzahrani & Woollard, 2011). James W. Peltier (2013) urges that forgetting is a common, critical & natural phenomenon. It may be accidental or intentional and in both cases, has sound impacts on organizational enactment and learning. Learning organizations adopt forgetting as a strategy to be successful, although it may cost them but it should be managed for better future (Adcock, 2012). Forgetting at both organizational and individual levels enhances individual and organizational capabilities and enables them to get new knowledge and insight (Aydin & Gormus, 2015). With the passage of time; creation, modification is needed or forgetting of old knowledge is required to stop doing useless things at both individual and organizational level for better sustainability and according to, it provides an opportunity for new learning, because old knowledge if exist, become barriers for the new learning (Barber, 2004). Forgetting should be the dynamics of learning organizations to innovate and to dominate in the market, to produce better, to sustained competitive advantage (Birmingham, 2015). It gives birth to agility which promotes effectiveness, empowers employees, brings sense of effectiveness, self-decision, competence, purposefulness in them and has positive association with organizational improvement.

Intentional forgetting can be grouped as cognitive, behavioural and social forgetting and organizations should focus on them to increase performance.

Different research findings suggest that unintentional (forced) organizational forgetting has direct negative impact on organizational learning effectiveness. These finding has also coherence with the finding of De Holan and Philips (2004) and shows badly affect knowledge management capacity, development and organizational performance. However, intentional organizational forgetting has excessive direct and positive impact on organizational performance by influencing on organizational learning and increasing knowledge management capacity; promotes organizational learning and performance (Ford, 2006).

Accommodation is a term developed by Jean Piaget to describe the process in which we modify existing cognitive schemas to include new information (Barber, 2004; Genevieve & Katrina, 2012). Individual and organization update their memory system with the previous schemata's and constructs when they find something new, interesting, effective and efficient (Noori, 2011; Ross, Oakes, & Luck, 2003). Organizations keep their memory updated to use and reuse them for the daily transaction. Old methods, models and process are replaced with the new ones to get in-line with the customer demands and ready for competitions and leading in the market. Therefore, organization must forget previous old phenomenon (Ackerman & Halverson, 2013; Perez & Ramos, 2013). Accommodation deals with the short term memory get change when internal and external stimuli effect. It is not in a mature form and can also be meaningless (Rutherford, 2011).

Assimilation is the process of improving the existing construct and phenomenon (Rutherford, 2011; Palangi, et al., 2015). It deals with the long-term memory, most of the time remains inactive, but function like deep and permanent storage, where old constructs are improved but not changed completely (Cherniak, 1983; Dudai, Karni, & Born, 2015). Psychology and the emerging cognitive neuroscience literature provide a developmental perspective on the emergence of prior knowledge and in its application during the processes of successful memory encoding, consolidation, and retrieval (Brod, Werkle-Bergner, & Shing, 2013; Simatwa, 2010). Like a human memory, assimilation in organization gets improve with communication, coordination and exchange of thoughts and ideas. Information technology provides good interface and medium to the employees to share in both public and private settings (Waldeck, Seibold, & Flanagan, 2004). Organizational mission, vision, mission, objectives and core values are saved in the long term of the organizational memory, which are modify with the passage of time, based on the need and requirement for operations and management in different cultures, countries and settings (Miller V. D., 2008; Chomngam, 2015). Assimilation with technology in organization is done in three steps i.e. contextual attributes, innovation attributes and interaction attributes (Truls & Petersen, 2017; Claybaugh, Ramamurthy, & Haseman, 2017). In contextual attributes, it takes the internal state of the organization, inline them with innovative latest models, methods and technologies to get new enthusiastic growth and improvement (García-Sánchez, García-Morales, & Martín-Rojas, 2017; Gunasekaran, et al., 2017; Claybaugh, Ramamurthy, & Haseman, 2017).

From the concepts of assimilation and accommodation it is evident that organizations keep doing changes in their short and long-term memory. They keep adopting innovative methods and technologies to get on the leading edges. They forget certain phenomenon and constructs and as a strategy for their sustainability, otherwise they may lose their dominancy and kingship like Nokia, Burnloun and many other multi-level-Marketing (MLM) companies.

FORGETTING THEORIES

According to sociological thoughts, construct and point of view, organizations are social entities. They adjust their selves according to the need and demands of the environmental demands in a very specific and directed form. Therefore, according to the demands of the environment, organizations change, learn and unlearn their routines, models and methods (Klammer & Gueldenberg, 2016). Like learning, forgetting is also natural phenomenon which occurs due to many reasons. Among the other, one main reason is the irrelevancy of the data and information. When data and information become unimportant and we don't use it for a long while in different settings and occurring, the information get absolute and with the passage of time it vanishes from the memory (Aydin & Gormus, 2015). Biological and psychological sciences accept and appreciate forgetting as it let new things to happen, which may have resulted to be more fruitful, effective and efficient (Blackman & Henderson, 2013). Different theories of forgetting have been widely discussed and accepted in psychology, which explains how forgetting occurs in different setting and memory. Trace decay theory explains that memory get lasted when it is not traced for a long while and the information stored get worse and outdated (Birmingham, 2015). Same phenomenon was discovered by Austrian neurologist Sigmund Freud, who sate that forgetting of unwanted data is must to get stable and smooth in personal and organizational lives. Because these create hurdles in the smooth functioning of the personal and organizational lives by putting and pouring outdated and useless information. He argues that both at individual and organizational level, we should go for forced forgetting to live a smooth and happy life (Eisenberg, 2016). Another theory of Cue-dependent forgetting state that some time information is available in the memory but we don't have accurate cue to load them. It further state that for loading and vanishing we need valid cue to sue for the same thing which we want to occur (Dóci, Stouten, & Hofmans, 2015; Morais-Storz & Nguyen, 2017). Almost same phenomenon has also been explained by Interference theory that forgetting occurring due to interference of so many internal and external stimuli, which interfere and force the memory to suppress its contents. Interference theory present same as phenomenon like suppress theory, because there suppressing occur due to interference of many wanted and unwanted stimuli (Ford, 2006; Dean, 2016). Similarly there are certain models of unlearning and forgetting like (1) the extinction model, the removal of undesirable knowledge from an individual; (2) the replacement model, the dissemination of new knowledge to an individual; (3) the exorcism model, the removal of inappropriately-behaving individuals from an organization, and (4) the salvation model , which sate that both individual and organization unlearn with the passage of time as they don't want to repeat the useless processes time and again (Tsang, 2003). These all above mentioned constructs, theories and models favour the concept that individual and organization forgets with the passage of time due to any of the above stated reason.

Human and organizational lives have been reshaped by technological advancements. Socio-technical, organizational cognitive theory possesses that organizational cognition, understanding and has been greatly affected by latest technologies like information system. Because information systems are the most exogenous factors in attaining and removing referential contents in different forms (Miertschin, Stewart, & Goodson, 2016). Therefore, researchers suggest that the biggest norm and function of the knowledge management, big data and information system should be to provide a cue to information and set aside or suppress and ignore the non-relevant information (Aggestam, Durst, & Persson, 2014).

FORGETTING FACTORS

Like learning, forgetting is also influence by different internal and external factors. But now researcher recommends organizational forgetting and takes them as a strategy for the leading and competitive edge.

Cognitive Factors of Organizational Forgetting

The cognitive perspective covers the recognition, assimilation, and use of new knowledge within the organization (Eryilmaz, 2016). It is the ability to absorb such knowledge depends very much on the existing cognitive structures and the internal mechanisms that are available for exploiting it (Ivanko, 2013). Here the cognitive forgetting means “not to remember” something (Eryilmaz, 2016). Internal knowledge transfer is also important, and here, things are complicated by the fact that some knowledge cannot be fully articulated so is tacit in nature and therefore, sticky (Perez & Ramos, 2013). Also, inherent in the cognitive perspective is the recognition that tacit knowledge is often embedded within the explicit knowledge and is difficult to separate out (Argote, 2013). This cognitive perspective is also developed further by Casey and Olivera, where it is closely linked to organizational memory. At the individual level, forgetting is easy to grasp: Over the years people forget what they have done and why, and memory tends to deteriorate with age so that it becomes harder to absorb and retain essential information. When teams lose key members, there is often a loss of knowledge and experience, which is like collective forgetting (Ford, 2006). When knowledge is transferred from one group, or organization, to another, it is often necessary for the receivers to reframe knowledge into their own terms so that it fits with their existing experience and they acquire “ownership” of it (Palangi, et al., 2015). This leads to some loss of the original information. Organizations therefore set up procedures to retain knowledge and experience, through providing minutes of meetings and decisions, and through establishing storage facilities and databases that retain design blueprints and other technical records that underpin company products. However, in practice, records decay over time. For many companies, the switch from paper-based records to electronic records has created another barrier. Technical records, for example on the design of aircraft that predate 1990, are generally kept in paper form or on microfiche. The problem is that very few people have access to the original filing systems any more, and microfiche readers are becoming increasingly rare. In Pilkington’s glass, old records are kept in boxes in a storage room, and each box has a barcode, which indicates who deposited the box. Unfortunately, no record is kept of the contents of boxes, and therefore, when searching for information, it is impossible to locate anything without knowing the likely interests and expertise of the original depositor of the box who might well have departed the company if not the world (García-Sánchez, García-Morales, & Martín-Rojas, 2017). Unlearning requires a fundamental transformation of a person’s frame of reference. Turc and Baumard (2007) propose an unlearning process centering on cognitive elimination of organizational knowledge. Hedberg (1981) also mentions the importance of decision makers’ cognitive styles and preferences since an organization’s proneness to forgetting heavily depends on how top managers perceive and respond to observed problems. Managers might misjudge current events by clinging onto their existing cognitive structures based on past successes (Phillips, Fletcher, Marks, & Hine, 2016; Bavolar & Orosova, 2015).

From this perspective, forgetting is about the loss of both tacit and explicit knowledge, because it is difficult to transfer, or people have moved on, or because technical and physical constraints limit potential access, switching from paper based to electronic environment and accidental losses. Change in decision making style and preference, top manager perception and response to observed problems. Proactive and retroactive interference, suppression and repression, memory disorder, dementia, and retrieval failure due to environmental context (Atefeh, Hasan, Behzad, & Mahdi, 2016; Argote, 2013).

Behavioural Factors of Organizational Forgetting

Forgetting in this context means not to adopt certain phenomenon or leave certain practice to improve the current state and performance. Behavioural theorists suggest that organizations

adapt incrementally based on their past experiences and recent practices (Dean, 2016). Repeated experiences reinforce certain behaviour, and the firm improves its performance as it becomes more proficient at the task (Akgün, Byrne, Lynn, & Keskin, 2007). This duplication of similar situations leads to the establishment of routines and procedures that sense out problems and deviations from the norm and initiates remedial action. Most routines, such as quality assurance or financial monitoring systems, are skewed toward maintaining stability and reducing uncertainty. This is what (Argyris, 1977) refers to as single-loop learning, and it predominates in most companies. However, higher level routines can be established which could question and to modify a range of existing operational routines (Adcock, 2012). These have the potential, therefore, to enable the organization to learn from experience over time, to improve over time, and ideally to repeat past successes and avoid repeating past failures. The behavioural perspective also emphasizes the way capabilities are developed from experiential learning and the importance of intuition to the extent that individuals may not be able to articulate exactly why they do things or to explain the basis of the knowledge they have. This parallels the ideas of tacit knowledge (Nonaka, 1994) and knowing-in-practice, which involve knowledge that is expressed only through the actions of individuals and the routines of organizations (Klammer & Gueldenberg, 2016). So, forgetting from a behavioural perspective relates either to losing the original rationale for establishing habits and organizational routines or to losing old routines, procedures, and systems themselves. This may or may not be a conscious decision—it may take place in a planned and orderly way, or it may simply be a matter that the individuals who championed practices and routines have left the organization or have otherwise lost their influence at the strategic level (Haunschild, Polidoro, & Chandler, 2015).

Main behavioural forgetting factors include all those aspects of behaviours, which create obstacles in the smooth functioning and performance enhancement. Due to interventions of information technology, workers have and suppose to leave certain behaviours to enhance the performance. Technology, socio-economic and human is the three aspects of the organizational forgetting to improve performance and efficiency (Ivanko, 2013). Beside the human interaction with the latest technological tools are made so attractive and welcoming that, the employees have been leaving previous phenomenon and behaviour, to be more productive and efficient in their personal and organizational lives (Akgün, Byrne, Lynn, & Keskin, 2007).

Social Factors of Organizational Forgetting

The social perspective emphasizes that the practices of organizational decision making, and attitude. According to this thought, knowledge creation is collective endeavour that take place within a social context (Alzahrani & Woollard, 2011). Thus, strategy is formulated, and operational decisions are made, through conversations between the managers and other individuals who are most centrally involved, either informally through “corridor conversations” or formally through meetings (Perez & Ramos, 2013). They are involved in sense-making about the opportunities and threats in the environment and thus work out collectively on how to focus resources on maximizing potential opportunities. The social perspective also recognizes diversity and the emergence of ideas. Different subgroups of managers will have different views about policy and strategy. Some may have more social success in imposing their ideas on others, and this will lead, at the organizational level, to the loss of the ideas that are no longer in favour (Morais-Storz & Nguyen, 2017). As indicated above, individuals may move away from groups or projects, and they may retire or otherwise leave the organization. This not only means that their individual knowledge and capability will be “lost,” it also means that their interconnectedness will be lost. Thus, the relationships within the group or team will be disturbed by the departure of an old member or the arrival of new members. Within the literature, there is a widespread assumption that this kind of

organizational turnover is a bad thing because of the loss of individual competencies and knowledge, although attempts to establish direct relationships between labour turnover and organizational productivity/efficiency have led to ambiguous results (Rao & Argute, 2006). Within the social view, the role of identity is also important (Anderson, 2003). This is not only a matter of the individuals who make up the organization but also the assumptions about the collective capability and purpose of the organization and of the history that brought it to its current position. History, in fact, may be reinvented or rewritten to provide a rationale for current decisions and ambitions. The rewriting of history may be deliberating and conscious (unlearning), or it may be largely accidental and unconscious because of the comings and goings of powerful individuals and groups or simply due to people forgetting the past (Ackerman & Halverson, 2013). Hence, from the social perspective, forgetting is more about the loss of the social networks and shared perspectives, which sustain worldviews and strategies. Technology infusion, materialistic fragments, inflation and other social issues have made busier resulting in forgetting many daily routines and prospective. It has caused to destroyed workers social skills, has reduced span of memorization and has caused social isolation (Klammer & Gueldenberg, 2016). Removal of selected events and stories, formation of new narrative and events also helps in forgetting at individual, group and organizational level (Harmanşah, 2014). Social amnesia is the collective forgetting, results from forced repression, ignorance and change in circumstances and interests (Wikipedia). Touches reality and Phenomenalism theories also support organizational forgetting, based on unwanted and hostile event forgetting (Nicholsen, 1989; Morizot, 2011).

CONCLUSION

According to some theorists Fiol and Lyons (1985), organizational learning involves behavioural, social and cognitive changes. Double-loop learning, by contrast, is particularly appropriate in organizations facing more turbulent environments and those that have intensive, as opposed to routine, work technologies (Alzahrani & Woollard, 2011). Individuals engage in a process of scrutinizing goals in relation to the environment and from people's personal and social environments through critical questioning. Finally, some illustrations of single versus double-loop learning in educational system can be imagined. With single-loop learning, faculty might have students locate information from the computers in place of using encyclopaedias or other classroom resources. The behaviour has changed but the underlying way of teaching and learning due to the incorporation of Internet and computer in teaching-learning processes. With double-loop learning, faculty could decide to rethink the use of computers, perhaps using them to re-examine and alter instruction.

With single-loop learning, employees might add a web page that serves the same purpose as a written brochure. With double-loop learning, employees might use the Internet to change the way they sell a product much in the way that Amazon.com has used the Internet to rethink ways of selling books. Taken together, the work of these four pairs of theorists suggests that both individual learning and habits of inquiry are necessary but not sufficient conditions for organizational learning. Organizational learning arises through on-going shared interpretation of data, perceptions, puzzling events, assumptions, and cognitive maps among organizational members. Organizational adaptation or single-loop learning occurs when an organization's existing frames of reference limit interpretation and tends to result in behavioural change without cognitive change. Organizational learning (double-loop learning) involves behavioural changes as well as cognitive changes in the shared understandings and underlying frames of reference guiding organizational behaviour.

References

- I. Alzahrani and J. Woollard, "The Role of the Constructivist Learning Theory and Collaborative Learning Environment on Wiki classroom , and the Relationship between Them," in *International Conference For e-learning & Distance Education*, UK, 2011.
- A. Adcock, "Cognitive Dissonance in the Learning Processes," *Encyclopedia of the Sciences of Learning*, pp. 588-590, 2012.
- E. Aydin and A. S. Gormus, "Does organizational forgetting matter? Organizational survival for life coaching companies," *The Learning Organization*, Vol. 22 Issue: 3, pp. 150-162, 2015.
- P. Barber, "Critical Analysis of Psychological Research: Rationale and Design for a Proposed Course for the Undergraduate Psychology Curriculum," *Psychology Learning and Teaching*, 2(2), pp. 95-101 , 2004.
- U. o. Birmingham, "Learning theories, stages and styles," University of Birmingham , Birmingham , 2015.
- R. Ford, "Organizational learning, change and power: toward a practice-theory framework," *The Learning Organization*, pp. 495 - 524, 2006.
- E. Genevieve and S. Katrina, "Optimising the transition process for youth leaving out-of-home care: A positive psychological perspective," *Developing Practice: The Child, Youth and Family Work Journal*, Issue no. 33 , pp. 59-68, 2012.
- N. Noori, "The Symbolic Working Memory: memory accommodations for schematic processing of symbolic information," University of Southern California, USA, 2011.
- S. Ross, L. Oakes and S. Luck, "Development of the Memeory Concepts," *Child Development*, Vol. 74, Issue. 6, pp. 1807-1822, 2003.
- M. S. Ackerman and C. Halverson, *Organizational Memory as Objects, Processes, and Trajectories: An Examination*, USA: University of Michigan, 2013.
- G. Perez and I. Ramos, "Understanding Organizational Memory from the Integrated Management Systems (ERP)," *Journal of Information System and Technology Management*, Vol 10, No 3, p. 155–189, 2013.
- G. D. Rutherford, "A Model of Assimilation and Accommodation in the Cognitive & Cultural Realms," *Dynamic Psychology*, pp. 52-68, 2011.
- H. Palangi, L. Deng, Y. Shen, J. Gao, X. He, J. Chen, X. Song and R. Ward, "Deep Sentence Embedding Using Long Short-Term Memory Networks: Analysis and Application to Information Retrieval," University of British Columbia, Canada, 2015.
- C. Cherniak, "Rationality and the Structure of Human Memory," *Synthese*, Vol. 57, No. 2, pp. 163-186, 1983.
- Y. Dudai, A. Karni and J. Born, "The Consolidation and Transformation of Memory," *Neuron* vol.88, pp. 25-38, 2015.
- G. Brod, M. Werkle-Bergner and Y. L. Shing, "The Influence of Prior Knowledge on Memory: A Developmental Cognitive Neuroscience Perspective," *Frontiers in Behavioral Neurosciences*, vol. 7 , pp. 22-37, 2013.
- E. M. W. Simatwa, "Piaget's theory of intellectual development and its implication for instructional management at presecondary school level," *Educational Research and Reviews* Vol. 5(7), pp. 366-371, 2010.
- . H. Waldeck, D. R. Seibold and A. J. Flanagin, "Organizational Assimilation and Communication Technology Use," *Communication Monographs* Vol. 71, No. 2, p. 161–183, 2004.
- V. D. Miller, "Organizational Assimilation," *The International Encyclopedia of Communication*, pp. 225-243, 2008.
- P. Chomngam, "Information Adequacy during Organization Assimilation Process in Thai Organization," Bangkok University, Thailand, 2015.
- T. N. Truls and E. Petersen, *Technology Adoption in Norway: Organizational Assimilation of Big Data*, Norway: Norwegian School of Economics, 2017.
- C. C. Claybaugh, K. Ramamurthy and W. D. Haseman, "Assimilation of enterprise technology upgrades: a factor-based study," *Enterprise Information Systems Volume 11, Issue 2*, pp. 250-283, 2017.
- E. García-Sánchez, V. J. García-Morales and R. Martín-Rojas, "Analysis of the influence of the environment, stakeholder integration capability, absorptive capacity, and technological skills on organizational performance through corporate entrepreneurship," *International Entrepreneurship and Management Journal*, pp. 1-33, 2017.
- A. Gunasekaran, T. Papadopoulos, R. Dubey, S. F. Wamba, S. J. Childe, B. Hazen and S. Akter, "Big data and predictive analytics for supply chain and organizational performance," *Journal of Business Research*, vol. 70 , p. 308–317, 2017.

- A. Klammer and S. Gueldenberg, "Organizational Unlearning and Forgetting – a Systematic Review," Liechtenstein, 2016.
- D. Blackman and S. Henderson, "Does A Learning Organisation Facilitate Knowledge Acquisition And Transfer," 2013.
- D. T. Eisenberg, "The Restorative Workplace: An Organizational Learning Approach to Discrimination," University of Maryland, 2016.
- E. Dóci, J. Stouten and J. Hofmans, "The cognitive-behavioral system of leadership: cognitive antecedents of active and passive leadership behaviors," *Frontiers in Psychology*, 2015.
- M. Morais-Storz and N. Nguyen, "The role of unlearning in metamorphosis and strategic resilience," *The Learning Organization, Vol. 24 Issue: 2*, pp. 93-106, 2017.
- P. J. Dean, "Tom Gilbert: Engineering Performance With or Without Training," *Models for Organizational Learning*, 2016.
- E. W. K. Tsang, "The Nature of Organizational Unlearning," *Knowledge Management, Organizational Intelligence, Learning and Complexity, Vol. 3*, pp. 49-61, 2003.
- S. L. Miertschin, B. L. Stewart and C. E. Goodson, "Mobile Devices and Lifelong Learning: The Students' Perspective," in *ASEE Annual Conference & Exposition*, Louisiana, 2016.
- L. Aggestam, S. Durst and A. Persson, "Critical Success Factors in Capturing Knowledge for Retention in IT-Supported Repositories," *Information*, pp. 558-569, 2014.
- M. Eryilmaz, "A Literature Review on Organizational Forgetting," *Annals of the "Constantin Brâncuși" University of Târgu Jiu, Letter and Social Science Series*, pp. 63-73, 2016.
- S. Ivanko, "Organizational Behaviours," university of ljubljana, slovenia, 2013.
- L. Argote, "Organizational Learning: Creating, Retaining and Transferring Knowledge," *Springer Science+Business Media*, pp. 31-58, 2013.
- Phillips, Fletcher, Marks and Hine, "Thinking styles and decision making: A meta-analysis," *Psychological Bulletin, 142(3)*, pp. 260-290, 2016.
- J. Bavolar and O. Orosova, "Decision-making styles and their associations with decision-making competencies and mental health," *Judgment and Decision Making, Vol. 10, No. 1*, p. 115–122, 2015.
- P. Atefeh, Z. M. Hasan, H. Behzad and A. Mahdi, "Investigation The Effect Of Intentional And Accidental Organizational Forgetting On Organizational Learning Process," *Organizational Culture Management Winter 2016, Volume 13, Number 4*, pp. 1179 -1200., 2016.
- A. E. Akgün, J. C. Byrne, G. S. Lynn and H. Keskin, ""Organizational unlearning as changes in beliefs and routines in organizations," *Journal of Organizational Change Management, Vol. 20 Issue: 6*, pp. 794-812, 2007.
- P. R. Haunschild, F. Polidoro and D. Chandler, "Organizational Oscillation Between Learning and Forgetting: The Dual Role of Serious Errors," *Organizational Sciences*, pp. 1682 - 1701, 2015.
- M. Anderson, "Rethinking interference theory: Executive control and the mechanisms of forgetting," *Journal of Memory and Language, vol.49, issue .4*, pp. 415-445, 2003.
- R. Harmanşah, "Performing Social Forgetting In A Post-Conflict Landscape: The Case Of Cyprus," University of Pittsburgh, Oakland, 2014.
- M. Nichol森, Formal Theories in International Relation, Australai: University of Salford, 1989.
- J. Morizot, "Phenomenalism In Epistemology And Physicalism In Aesthetics," Federal University of Santa Catarina (UFSC), Brazil, 2011.