

# Developing Organizations: A Metaphorical View

**Brenda Barker Scott**  
Facilitator, Queen's IRC



Industrial Relations Centre (IRC)  
School of Policy Studies  
Queen's University  
Kingston, ON K7L 3N6

Tel: 613-533-6628  
Fax: 613-533-6812  
Email: [irc@queensu.ca](mailto:irc@queensu.ca)  
Visit us at: [irc.queensu.ca](http://irc.queensu.ca)

Can organizations be designed to grow people? With the emphasis on talent and knowledge management in today's uber-competitive business context, the assumption certainly seems to be yes. The reality, however, is that many organizations fail to develop or tap the competence of their people. Referring to the problem of pervasive disengagement amongst today's workforce, Gary Hamel (2012) laments that organizational systems are more likely to "frustrate extraordinary accomplishment than to foster it" (p. 137). Just what is the relationship between people development and organizational development? Can organizations be designed to foster both? How are our views about this relationship evolving?

To ponder these questions, I trace the evolution of how theorists and practitioners have viewed organizations, and the development of people within them. My viewfinder for this journey will be the lens of metaphor<sup>1</sup>. For, suggests Morgan (2006), the images, frames and perspectives we bring to the study of organizations very much shapes what we can know about them. If the way that we understand organizations and shape management practices is based on implicit metaphor, then what might we see—about preferred structures, practices, and models of organizational life—as we adopt alternative worldviews? Just as importantly, with each change of the viewfinder, what might we miss?

I begin with the mechanistic lens, often associated with Frederick Taylor's (1911) scientific management. Here organizations are viewed as machines and people development is focused on isolating and perfecting skills in service of operational efficiency. With the advent of the human relations movement, an organic view of the organization emerged. Pioneering theorists Elton Mayo (1933), Abraham Maslow (1943), and Kurt Lewin (1947) identified the important linkages between employee aims and motivations, the social and technical environment, and organizational performance. More recently, those espousing the contextualist worldview place practice, within one's workplace community, as the core lens through which human and organizational development are explored.

## **Mechanism**

The mechanistic perspective implies that it is possible to understand phenomena—in our case humans and organizations—as if they function like machines. Indeed, the industrial revolution, originating in England in the 1780s, marked a radical shift from human power to machine power. The cotton gin, the electric engine, the telegraph, and the expansion of the railroad all opened markets and paved the way for mass production. As workers moved from the farm to the factory floor, entrepreneurs faced the competitive challenge of organizing work to produce

---

<sup>1</sup> I explore the dominant models and practices of the adult development and organization development literatures, through the lens of Pepper's (1961) mechanistic, organismic and contextualist worldviews (in Goldhaber, 2000).

high volumes, efficiently. Adopting the machine as the metaphor for progress, leaders strove for precision, efficiency, reliability and predictability; all prized traits of a mechanistic system (Dessler, 1980; Goldhaber, 2000; Morgan, 2006).

Inspired by the machine metaphor, the study of human and organizational development involves the search for the laws (or levers) that shape desirable workplace behaviors. With the dual goals of efficiency and worker-management harmony, Frederick Taylor (1911) set out to define those levers. Taylor rigorously collected data and analyzed work patterns to determine the *one best way* for structuring all tasks. Taylor then broke tasks into parts and trained workers to get the most from each motion. To secure compliance, he carefully selected employees and rewarded them for performing tasks expertly and efficiently. Taylor's methods were strikingly consistent with stimulus response theory, whereby behavior is hypothesized to be influenced by its consequences; positive reinforcement to encourage it, punishment to discourage it, or extinction to extinguish behavior (Skinner, 1953; Watson, 1924). Thus behavior was largely understood to be a rational response to external variables, as portrayed by this rather extreme assertion by Watson (1924),

Give me a dozen healthy infants, well formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, merchant—chief, and yes, even beggarman and thief, regardless of his talents, penchants, tendencies, abilities and vocations, and race of his ancestors. (p. 104)

At approximately the same time, German sociologist Max Weber (1947) identified the ideal organization as a bureaucracy. With a fixed division of labor, a hierarchy of offices, and a set of rules governing performance Weber suggests that the merit of the bureaucracy is its technical superiority to produce “precision, speed, unambiguity, knowledge of the files, continuity, discretion, unity, strict subordination, reduction of friction and of material and personal cost ....” (Weber, 1947, p. 214). In effect, Taylor's principles and Weber's bureaucracy were designed to emulate a simple machine. Given the challenges and context of the day—mass, standardized production coupled with lax (or completely absent) management systems—it made good sense to organize jobs and workers into specific functions, with tightly bound rules, to produce the most efficient operations (Dessler, 1980).

And so, what is the relationship between people and organizational development according to the mechanistic tradition? Those who managed by the classical approach saw their role as shaping and molding employee skills and behaviours through a full suite of levers, including job design, technical training, rewards, punishments and boundaries. With an emphasis on

rational order and centralized control, little attention was paid to employee needs, aspirations, emotions, or creativity. In espousing the value of disciplined action, Weber writes,

The content of discipline is nothing but the consistently rationalized, methodically trained and exact execution of a received order, in which all personal criticism is unconditionally suspended and the actor is unswervingly and exclusively set for carrying out the command ... (Weber, 1947, p. 22).

Indeed, as Weber's quote suggests, personal variables were considered to be unreliable and dismissed as potential irritants to operational efficiency.

The mechanistic tradition continues to have a pervasive influence on contemporary organizational life. Work practices including detailed job descriptions, pay for performance or skill, work process analysis, and communication and decision protocols, remain firmly enmeshed in contemporary workplaces. While each practice differs in form, at root, each serves to focus and shape employee behavior in accordance with the laws of efficiency and/or predictability.

## Organicism

The root metaphor for the organic perspective is the living organism, adapting and evolving in response to its ever-changing environment. Through the organic viewfinder, human behavior is a function of the rich interplay between environmental forces (for example, rules, protocols, systems, structures, leadership) and personal psychological forces (for example aims, needs, desires, fears). More than the sum of their parts, organizations are viewed to be alive; in response to their environments they adapt and align around ever evolving goals (Goldhaber, 2000; Morgan, 2006).

In the 1930s and 1940s pioneering theorists Elton Mayo (1933), Abraham Maslow (1943), and Kurt Lewin (1947) began noting that, in addition to the formal organization, an informal and unpredictable organization exists. Indeed Mayo's Hawthorne studies—originally based on the mechanistic hypothesis that lighting could be optimally adjusted to support worker productivity—illuminated quite another reality. As productivity increased independent of the lighting levels, the researchers discerned that it was the social conditions that mattered. For, if it wasn't the physical conditions that influenced effort, perhaps the positive group norms and participative supervision had an intrinsic motivating potential. This discovery, that motivation is a result of the complex interaction of psychological, social and contextual forces, opened the path to a more organic image of the organization (Dessler, 1980).

With an appreciation of internal needs and aspirations, theorists began to focus on how the innate needs, values and abilities of employees evolve and entwine as they mature. Perhaps the most widely known typology of human needs is Maslow's (1943) hierarchy. Visualizing needs as a pyramid, from basic physiological to social and esteem needs, humans are assumed to be in a continuous motivational state whereby higher order needs become activated as lower order needs are fulfilled. Theoretically, the pinnacle of development is self-actualization; one's highest, most integrated and authentic self. Alongside Maslow, others developed stage-based typologies, including Alderfer's (1972) existence, relatedness, and growth typology, and Argyris' (1964) seven life stages, whereby individuals mature as they develop increased self-awareness and self-control, from the relatively dependent child to the interdependent adult.

Given the importance of the intrinsic motivation, organizational theorists identified a challenging yet supportive context as fuel for employee development and growth (Argyris, 1964). The antithesis of Taylor's simplified and bounded jobs, theorists from the human relations movement prescribed ambitious and meaningful work to advance employee potential. As Chris Argyris (1964) pointedly advocated, "What man actually needs is not a tension-less state but rather the striving and struggling for some goal worthy of him" (p. 6).

With an emphasis on employee motivation and vitality, researchers set out to define the contextual factors leading to an enriched work environment. The prescription for "challenge" came by way of enlarged jobs, participatory decision making, and goal setting; all factors enabling the development of psychological investment and relational competence, as well as the honing of core mental abilities (Argyris, 1964; McGregor, 1960; Herzberg, 1968). The prescription for "support" came by way of enabling supervision and working relationships, leading to much work in the areas of participative leadership, teamwork and culture development (Lewin 1947, Schein, 1992).

Spurred by significant changes in the environment—including global competition, turbulent markets and technological advancements—organizations throughout the 1980s and beyond attempted to fundamentally alter their business models and operating systems. In concert, systems thinking evolved from a focus on working with individuals and groups, to a focus on whole systems transformation (Seo, Putnam & Bartunek, 2004). Viewing organizations as open systems of many co-evolving parts—units, technologies, levels, processes—the focus shifted to aligning organizational features such as strategy, structure and processes to be "fit" for, or congruent, with the wider environment (Burns & Stalker, 1966; Lawrence & Lorsch, 1967). Just as "challenge" was identified as the impetus for individual and group learning, it also became the fuel for organizational transformation. With organizational adaptation as the core aim, organizations that were resistant to change were deemed as ineffective and stuck. On point,

Dannemillar and Jacobs (1992) described organizations with tightly bound, rigid systems that prevented people from connecting, collaborating, and adapting as being arthritic.

As organizational responsiveness became trump, theorists designed a number of approaches and techniques to encourage whole systems transformation. Earlier approaches focused on the ability of top leaders to generate compelling visions and strategies for transformation (Seo, Putnam & Bartunek, 2004). The introduction of large group techniques, including Marvin Weisbord's (1995, 2000) Future Search and Kathy Dannemillar's (1992) Whole Scale Change, enabled a wide representation of stakeholders to be engaged in the process of diagnosing the challenges, envisioning a desired future, and action planning. By living the process itself, stakeholders were assumed to develop expanded mental models, new relationships, and skills for collaboration, all factors promoting cognitive, behavioral and relational development.

On a parallel front, a focus on whole systems led theorists to search for the set of organizational features that promote adaptability and responsiveness. A host of interconnected features were identified including a firm's learning aims, leadership, structure, relationships, authority matrix, norms, and knowledge management systems, amongst others (Inkpen & Crossan, 1995; Nonaka & Konno, 1998; Vera & Crossan, 2004; Zander & Kogut, 1995). Independent of how a firm defines its features, it has become widely appreciated that contextual factors shape individual and group learning and development. Highlighting the importance of a supportive organizational context for learning and development, Antonacoulou (2006) pointedly suggests that "individual learning in some respects is as good as the organizational context in which it takes place." (p. 468).

And so, what is the relationship between people and organizational development according to the organic tradition? Given the metaphor of the living organism, organizations are alive. More than the sum of their parts, they respond to their environments, initiate change and create and align around visions. Prescribing a challenging and supportive context, theorists and managers sought to develop people by keeping them involved and continuously challenged via enriched, jobs. In turn, it was theorized, a dual gain was realized for the organization; as employees developed, so too did their organizations (Argyris, 1964; McGregor, 1960). Later approaches focused on aligning all parts of the organization—strategy, structure, processes and people—in line with compelling goals designed to meet competitive pressures. Accordingly, employee development became synonymous with the ability to adapt to environmental cues. Of great importance, the concept of learning and development shifted from the passive transfer of codified knowledge from expert to student, to learning as an active and social process that enables the development of new individual and group insights, behaviours and relationships.

## Contextualist Worldview

A growing appreciation of the interconnectedness of people and their environments has led to the emergence of a biological/ecological paradigm. Instead of viewing organizations as a gigantic machine or a living organism, the contextualist sees an entangled, complex, ever-evolving web. With development highly dependent upon context, its role has been amplified to understanding the *unique* aspects of how one's historical, social and cultural setting shape behavior and development (Goldhaber, 2000).

Adopting the metaphor of the evolving web, development is understood to be a function of the overlapping and connecting web of skills—biological, motor, cognitive, spiritual, perceptual, relational—that develop given an employee's life context. As the web expands and connections strengthen, it provides an enriched platform for emerging skills. Summing up the diverse and evolving perspectives of the dialectical theorist, Judy Stevens-Long (2009) suggests that development is many things and occurs in many ways; it can be acquired through training, experiences, reflection, and experimentation to influence our cognitive, social, emotional and physical growth. In this way, development is *everything*; all experiences and inputs become integrated into the learner's repertoire of skills and abilities (Stevens-Long & Michaud, 2003). As evidence mounts around the inter-connectivity amongst body, spirit and mind, progressive organizations are developing a renewed emphasis on employee health and vitality (Grawitch, Gottschalk, & Munz, 2006). As but one example, some organizational theorists are advocating for meditation, exercise and spiritual practices to be introduced into leadership development (Wheatley, 1992; Wilber, Patten, Leonard, & Morelli, 2008).

Organizations are not viewed as inert, mechanistic entities, but rather active, social, and dynamic places whose essence springs from the people who inhabit them (Manning & Binzagr, 1996). Following, organizations evolve as members learn, articulating, testing and refining their mental models to stimulate new thinking and behaviors (Argyris & Shon, 1978; Daft & Weick, 1984). Dismissing the Tayloristic notion that knowledge can be codified and easily transferred via training manuals, contextualists assert that practitioner-developed *knowing* must be absorbed through practice via challenging projects, mentorship, apprenticeship and the like. In turn, social interaction is the glue that enables the exchange and synthesis of knowledge that resides within groups and communities (Esterby-Smith, Crossan & Nicolini, 2000; Wenger, 1991; Wenger & Snyder, 2000).

A number of approaches have been built to encourage practice-based learning amongst organizational members. Many focus on conversation and discourse, including Owen's (1992) Open Space meetings and Cooperrider's (2003) Appreciative Inquiry. Others, like social network analysis, focus on building enabling webs of connectivity amongst members (Cross,

Parker & Sasson, 2003), while the community-of-practice approach enables working-in-learning opportunities (Brown & Dugid, 1991; Wenger & Synder, 2000). Perhaps the learning organization, popularized by Peter Senge (1990), provides the philosophical home for many of the emerging technologies, touting systems thinking, group dynamics, evolving insights and a supportive infrastructure. All methodologies share in common the notion that development is not a function of guiding and controlling learners so that they arrive at a “right” answer, but of unleashing the natural energy that already exists within the system (Weber & Manning, 1998). For example, Owen (1992) suggests that the facilitator’s role during an open space meeting is to “create an open forum in order for the “energy” that always exists among a group to emerge” so that it can be channeled for productive use (in Manning & Binzagr, 1996, p. 274).

More recently, theories are emerging to tap the complex and adaptive nature of organizations including complex adaptive systems theory (Wheatley, 1992) and complexity theory (Capra, 2002). General guidelines for a complex adaptive organization include the cultivation of inquiry and generative thinking, strong connectivity between people and their environments, rapid feedback loops for self-corrections, and the honoring of diversity. These fluid, networked forms have been envisioned as spider plants and brains (Morgan, 2006), a garbage can (Cohen, March & Olsen, 1972), spaghetti (Kolind, 2006), project based adhocracies (Mintzberg, 1989) and networks (Gould & Campbell, 2002).

And so, what is the relationship between people and organizational development according to the contextualist tradition? Given the understanding that development is built from a wide variety of experiences and over a variety of intersecting modes—psychological, cognitive, physical, spiritual, relational—‘experience’ has surfaced as the great teacher. Rather than a formal ‘training oriented’ activity, practice-based learning is assumed to be a natural and ongoing process, that occurs as people join to confront everyday work challenges (Cook & Brown, 1999; Gherardi, Nicolini & Odella, 1998). It is through practice that members learn about what is to be done, when and how. In turn, as members practice and manifest their knowledge, they and their organizations learn (Blackler 1995; Cook & Yanow 1993; Gherardi 2006; Lave & Wenger 1991; Wenger 1998; Nicolini et al., 2003). Significantly, because organizations are constructed from the collective aims, abilities and assumptions of employees, organizational development and people development are one and the same. Given the expanded view of what it means to develop, organizations must be constructed to enable a holistic view of development, through experiences that stretch, connect and foster practice-based responsiveness. For if people stagnate, the system will atrophy.

## Implications of Mixed Metaphors

At a time when organizations, around the globe and of all types and sizes, are pressed to adapt to fast changing environments, people too must adapt. However, as Gary Hamel in his book *The Future of Management* (2007) points out, when organizational leaders from a traditional bureaucracy ask employees to become speedy, innovative and flexible, it is like asking a *dog to dance the tango*; speed, innovation and flexibility are simply not in the organization's DNA. Through the lens of metaphor, mechanistic on the one hand and organic/contextualist on the other, one sees the profound wisdom in Hamel's observation.

Pre-dating the industrial revolution, the genome of the traditional bureaucracy is the machine. With mass production, precision and reliability as the goal, the organization as machine tradition seeks to codify and standardize in pursuit of exploiting what has worked in the past. Employee development is understood to be the parceling and imparting of job specific competencies and attitudes through training, rewards and tight boundaries. With knowledge viewed as a commodity that can be codified as *know what*, development techniques rely on bundling and cascading knowledge for employees to consume. Problem solving techniques rely on exploiting what is already known via continuous improvement efforts such as quality circles, bench marking and process re-engineering.

To adherents of the organic and contextualist traditions, the focus on re-engineering and efficiency conflicts with the humanistic, participatory and systems oriented genome. With healthy, enabled and energized employees as the goal, leaders value diversity and seek to connect people around challenging goals. Employee development is a messy process whereby knowledge develops within practice-based communities, as employees tackle everyday challenges. Organizational goals, structures and values serve as a source of energy and alignment; they create the container for collective work and innovation (Wenger & Synder, 2000).

Until recently, theorists have treated these divergent views of the organization as either/or propositions, favoring structured, linear, outcome-driven organizations, or more organic, learning organizations. The problem with this split approach, is that by promoting one view over the other—for example efficiency over flexibility—the merits associated with the non-favored view are ignored (Overton, 2006). The plot thickens as we lose sight of the core assumptions from which each view evolved; order, clarity, efficiency on the one hand and human ingenuity in service of organizational health and agility on the other. Absent those ideals, unintended consequences, akin to the shadow of the organization emerge. While the bureaucracy's shadow may be characterized by rigidity, red tape and finger pointing, the shadow of the fluid network may be bedlam, disarray and inefficiency. Either result leads to

quashed employee initiative and stymied development. Worse yet, split thinking can promote rather schizophrenic leadership. As managers are called to innovate and adapt, they may ‘speak the words’ yet unknowingly think and act from a mechanistic assumption base. Just like Hamel’s (2007) tango dancing dog, when managerial assumptions and behaviours are out of alignment, the results are superficial and neither efficiency nor innovation is achieved.

The reality is that contemporary workplace challenges require organizational leaders to do *everything*; be innovative *and* efficient, and promote flexibly *and* reliability. Every organization needs structure for the focus and discipline it affords, but without the unintended consequences associated with rigidity, low commitment and apathy. Similarly, organizations need innovation, diversity and flexibility, but not the unintended consequences associated with unfocused, laissez faire individuality. What if our lens enabled organizational leaders to leverage the best of both? To, for example, design standards that enable innovators to collaborate, or to create protocols that promote knowledge sharing. On the employee front, what if we viewed development holistically, understanding that social, emotional and relational abilities are intertwined with cognitive and physical ones? If we could free ourselves from the notion that a lack of control leads to chaos, or that training is synonymous with development, how might that free us?

Can organizations be designed to grow people? As we have explored through metaphor, our ideas and theories of development are a product of the “spirit, thinking and knowledge” of their time and place (Lerner, 2006). These assumptions and worldviews are largely implicit; they are the air we breathe and the water we swim in. Unknowingly, our legacy assumptions and practices may be preventing us from seeing and embracing the evolving realities of organizational life. Perhaps it is time for a turn, a few large cranks, of our viewfinder to experiment with an expanded, more complex worldview. Through such a lens, what might we let go of? As we let go, what more might we see?

## About the Author



Brenda Barker Scott has extensive experience in all aspects of organizational development acquired over a twenty-year career in teaching and consulting. Brenda is an instructor on a number of the Queen’s IRC programs including Building Smart Teams, HR Decision Making, Organization Development Foundations, and Organizational Design. She is a graduate of Queen’s University, and the co-author of *Building Smart Teams: A Roadmap to High Performance*.

## References

- Alderfer, C. (1972). *Existence, relatedness, and growth; Human needs in organizational settings*. New York: Free Press.
- Antonacopoulou, E. P. (2006). The relationship between individual and organizational Learning: New evidence from managerial learning practices. *Management Learning*, 37(4), 455–473.
- Argyris, C. (1980). *Overcoming organizational defences: Facilitating organizational learning*. Allyn & Bacon, Boston.
- Argyris, C. (1964). *Integrating the individual and the organization*, New York: Wiley.
- Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. San Francisco, CA: Jossey-Bass.
- Brown, J., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning and innovation. *Organization Science*, 2(1), pp. 40–57.
- Burns, T., & Stalker, G. (1961). *The management of innovation*. Tavistock: London.
- Capra, F. (2002) *The hidden connections: A science for sustainable living*, Random House: New York.
- Cohen, M. D., March, J. G. & Olsen, J. P. (1972). A garbage can model of organizational choice, *Administrative Science Quarterly*, 17, 1-25.
- Cooperrider, D., Whitney, D., & Stavros, J. (2003). *Appreciative inquiry handbook*. Bedford Heights, OH: Lakeshore Publishers
- Cross, R., Parker, A., Prusak, L., & Borgatti, S. (2001). Knowing what we know: Supporting knowledge creation and sharing in social networks. *Organizational Dynamics*, 3(2), 100-120.
- Daft, R. L. & Weick, K. E. (1984). Toward a model of organizations as interpretation systems, *Academy of Management Review*, 9, 284-295.
- Dannemiller, K. & Jacobs, R. (1992). Changing the way organizations change: A revolution of common sense. *Journal of Applied Behavioral Science*. 28(4), 480-98.
- Dessler, G. (1980). *Organization theory: Integrating structure and behaviour*. Englewood Cliffs: Prentice Hall

- Easterby-Smith, M., Crossan, M., & Nicolini, D. (2000). Organizational learning: Debates past, present and future. *Journal of Management Studies*, 37(6), pp. 784–796.
- Goldhaber, D. E. (2000). *Theories of human development, integrative perspectives*. Mountain View, CA: Mayfield Publishing Company.
- Gould, M., & Campbell, A. (2002). *Designing effective organizations: How to create structured networks*, San Francisco: John Wiley and Sons.
- Hamel, G. (2007). *The future of management*. Harvard Business School Publishing: Boston, MA.
- Hamel, G. (2012). *What matters now: how to win in a world of relentless change, ferocious competition, and unstoppable innovation*. Jossey Bass: San Francisco.
- Herzberg, F. (1968). One more time: how do you motivate employees? *Harvard Business Review*, January-February, pp. 53-62.
- Inkpen, A.C., & Crossan, M. M. (1995). Believing is seeing: joint ventures and organizational learning. *Journal of Management Studies*, 32(5), 595–618.
- Issacs, W. (1999). *Dialogue and the art of thinking together*. New York: Doubleday.
- Kolind, L., (2006). *The second cycle: Winning the war against bureaucracy*. New Jersey: Wharton School Publishing.
- Lawrence, P., & Lorsch, J. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12, pp. 1-47.
- Lerner, R. (2006). Developmental science, developmental systems and contemporary theories of human development. In W. Damon and R.L. Lerner (eds.). *Handbook of Child Psychology*, (1), pp.1-17.
- Lewin, K. (1947). Frontiers in group dynamics: II. channels of group life; social planning and action research. *Human Relations*, 1(2), pp.143-153.
- Manning, M., & Binzagr, R. G. (1996). Methods, values, and assumptions underlying large group interventions intended to change whole systems. *International Journal of Organizational Analysis*, 4(3), 268–284.
- Maslow, A. H. (1943). *A theory of human motivation*. *Psychological Review*, (50), pp. 370-96.
- Mayo, E. (1933). *The human problems of an industrial civilization*. Macmillan: New York.
- McGregor, D. (1960). *The human side of enterprise*. New York: McGraw-Hill.

- Mintzberg, H. (1989). *Mintzberg on management*. Simon and Schuster: New York.
- Morgan, G. (2006). *Images of organization, (latest edition)*. Newbury Park, CA: Sage Publications.
- Nonaka, I., & Konno, N. (1998). The concept of "Ba": Building foundation for knowledge creation. *California Management Review*, 40 (3) Spring, pp. 40-54.
- Overton, W. (2006). Developmental Psychology: philosophy, concepts, methodology. In W. Damon and R.L. Lerner (eds.). *Handbook of Child Psychology*, vol. 1, pp.1-17.
- Owen, H. (1992). *Open space technology*. Potomac, MD: Abbott Publishing.
- Schein, E. (1992). *Organizational culture and leadership* (2nd Ed.) San Francisco: Jossey-Bass, (Chapters 1 & 2).
- Seo, M; Putnam, L., & Bartunek, J. (2004). Dualities and tensions of planned organizational change. In Poole, M and S Van de Ven (eds). *Handbook of Organizational Change and Innovation*. Oxford University Press.
- Senge, P. (1990). *The fifth discipline: The art and practice of the learning organization*. New York, NY: Currency Doubleday.
- Skinner B F. (1953). *Science and human behavior*. New York: Macmillan.
- Stevens-Long, J. (2009), Paradigms And Theory in Human Development. Retrieved from <http://www.epsilen.com/MyPortal/Public/CustomTab.aspx?tabID=1961&prefix=jslong>.
- Stevens-Long, J., & Michaud, G. (2003). Theory in Adult Development: The New Paradigm and the Problem of Direction. In J. Demick & C. Andreoletti (Eds.) *Handbook of Adult Development*. New York: Kluwer Academic/Plenum Publishers.
- Taylor, F. (1911). *The principles of scientific management*. New York: Harper.
- Vera, D., & Crossan, M. (2003). Organizational learning and knowledge management: Toward an integrative framework. In M. Easterby-Smith & M. Lyles (Eds.), *The Blackwell handbook of organization learning and knowledge management* (pp. 122-141). Malden, MA: Blackwell Publishing Ltd.
- Watson, J. B. (1924). *Behaviorism*. New York: People's Institute Publishing Company.
- Weber, M. (1947). In *From Max Weber: Essays in Sociology*, trans. and ed. H. H. Gerth and C. Wright Mills, 1947, Oxford University Press, New York, Inc.

- Weber, P., & Manning, M. (1998). A comparative framework for large group organizational change interventions. In Woodman R.W. and Pasmore, W.A. (Eds.), *Research in Organizational Change and Development* (Vol. 12), Greenwich, CT: JAI Press, Inc.: pp. 225-252.
- Weisbord, M., & Janoff, S. (1995/2000). Future Search: An action guide to Finding Common Ground in Organizations and Communities. San Francisco: Berrett-Koehler.
- Wenger, E., & Snyder, W. (2000). Communities of practice: The organizational frontier. *Harvard Business Review*, 78(1), 225–246.
- Wheatley, M.J. (1992) *Leadership and the New Science: Learning about Organization from an Orderly Universe*, Berrett-Koehler, San Francisco.
- Wilber, K.; Patten, T.; Leonard, A.; Morelli, M. (2008). Integral life practice: A 21st-century blueprint for physical health, emotional balance, mental clarity, and spiritual. Integral Books, Shambhala Publishers, Boston, Mass.
- Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization Science*, 6(1), pp. 76–92.