Dear colleagues,

It is a pleasure for me\(^1\) to take few minutes to look at Results-Oriented Organizations from a Bertalanffyan Perspective. I will try to correlate some aspects of organizational behaviours and structures found in such organizations with some concepts associated with systemic and cybernetic orientations as developed by von Bertalanffy as early as 1928 in the Modern Theories of Development.

My purpose is to illustrate that most of van Bertalanffy’s ideas and concepts are still relevant in our present times. This presentation gives me the opportunity to reflect again on his writings and for this I am very grateful. My Ph.D dissertation which I began in 1975 was a “synoptic” study about LvB’s overall work. Since that time, LvB has been my mentor. I did not pursue intensive research on his work but his principles and concepts were part of my teaching and management duties for the past 35 years.

I was privileged to meet Maria von Bertalanffy in Sept. 1977. Early in my academic career, I was invited as a guest speaker for the IX\(^{\text{th}}\) von Bertalanffy Memorial Lecture in Washington (D.C.) (1981). In 2001, I met Gisele Bertalanffy and since then we have been having frequent conversations.

**WHAT I LEARNED FROM LvB**

The first thing I learned is the “open system” concept which is usually defined as “a set of elements in mutual or dynamic interaction with their environment”. Since then, many writers have adopted that definition and it has been largely publicized. But LvB’s definition is more complex since he added some characteristics to the processes involved in an open system such as the transformation process controlled by the system and the notions of equifinality, steady state and negentropy. These characteristics can be interpreted as the inherent capacity of an open system to be able to transform data and energy into information in order to make its own decisions. I consider that capacity of decision making as the main characteristic of an open system.

There were clear distinctions in LvB’s mind between the concepts of “open system” and “cybernetics”. I will summarize his arguments based on “The meaning of general system theory” (1955), “Some aspects of System theory” (1964), “The model of open system” (1968), all reprinted in General System Theory (1968) and Robot, Men and Mind (1967):

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\(^1\) The author would like extend his gratitude to Michelle Boucher for her help in bringing this paper in its final form.
Table 1: Characteristics of Open and Closed Systems.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Open system (Living being)</th>
<th>Cybernetics (closed system) (Thermostat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundations</td>
<td>Dynamic interaction</td>
<td>Feedback</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Feedback and information</td>
</tr>
<tr>
<td>Processes</td>
<td>Imports energy, data from the outside, transforms the information and makes decisions; neguentropy</td>
<td>Is pre-regulated by an external force</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Imports energy, data from outside, transforms the information accordingly to the external command; entropy</td>
</tr>
<tr>
<td>Focus on</td>
<td>The process</td>
<td>The structure</td>
</tr>
</tbody>
</table>
| Ways toward equifinality | False start  
Asymptote  
Overshot  
The final state is not determined by the initial state | Asymptote: the initial state determines the final state                                                  |
| Application to human beings | Able to make decisions, to adjust by itself to the environment; proactivity | Does what is requested from an external force; reactivity                                               |
| Application to organizations | Able to read the environment and react positively, processes constantly in adjustment with the input from the environment | Bureaucratic type of organizations, less sensitive to external changes                                   |
| Representation        |                                                                                           |                                                                                                        |
| Regulations           | Deals with dynamic regulations resulting from the mutual interactions of the components    | Deals with of regulations of mechanical type resulting of prefixed arrangements                         |
The second thing I learned is the importance of creativity and individual differences, characteristics of an open system. He pointed this out when applying the “General System Theory” in various fields of science, notably in psychology and psychiatry. Creativity is a consequence of an autonomous decision making process. It is also closely related to the proactivity process.

A third important concept is that any addition to a system implies a reshaping of the system. You cannot add a part to elements which interact without having a “new” configuration since all the relationships between the elements will be affected. It is the essence of a system to have dynamic relations and to change patterns of relations if something is added.

Finally, the concept of isomorphism (or structural similarities) is, for von Bertalanffy, the consequence of the general properties of systems. He postulates three levels in the description of phenomena: analogy, homology (with an association with isomorphism) and explanation. Analogies deal with superficial similarities between phenomena with no correspondence in their causes or in their governing laws. Homology implies that factors identified in phenomena may be different but their laws are identical. Analogies, per se, are scientifically worthless while homologies yield valuable models. Analogies deal with functional similarities (for example, if you are dealing with “clients”, you are like any organizations dealing with clients) while homology or isomorphism deals with structural similarities (like ideologies, organizational climate and culture).

These four elements open system (versus cybernetics), creativity and individual differences, wholeness (versus additivity) and isomorphism (versus analogy) oriented my academic and professional life through my relationships with students, in my administrator’s relationships with my colleagues and my perception of the programmes.

Essentially, the concepts of open system, creativity (that is, thinking out-side of the box), wholeness and isomorphism were my guiding principles.

Mainly, von Bertalanffy advocates a new image of Man

“Such a new image of Man replacing the robot concept by that of system, emphasizing imminent activity instead of outer-directed reactivity and recognizing the specificity of the human culture compared to animal behaviour should lead to a basic re-evaluation of problems of education, training, psychotherapy and human attitudes in general. (1968, p. 194)

Now, since he stated these ideas at the end of the 60’ (and they had already been proposed, with a different wording, in 1928), are they still valid in 2010?

THE ORGANIZATIONS

Organizations have always been oriented toward results. This is very obvious, at least for the private sector. It is the essential condition for its survival. Gradually, in our contemporary world, major changes happened through the emergence of globalization, the open market and, the quest for excellence and quality since there are multiple options for the customer/client. Competition drives organizations to deal with quality, quality control and quality insurance. There are no more protected areas (even if there are
important negotiations on cultural goods) which means that a product is in direct competition with other similar products originating from all over the world. That, in turn, implies quality control, standardization and, routines. The workers are considered an expendable resource. The rate of production is high; the just-in-time approach is the private sector’s key-word.

The public organizations also deal with results-oriented requirements but in a different perspective. Two definitions are required at this point: they relate to the modern and the post-modern organization.

A modern organization (with reference to the Kantian and the Enlightenment notion of Reason) is based on the machine metaphor and, the weberian conception of bureaucracy as an archetype. “Weber and his followers personify organizations as one of the great achievements of modernity” (Hassard, 1996, p.50). The traditional concepts associated with a bureaucracy such as job description, responsibilities, hierarchy, written procedures, a split between the work place and the personal life, etc. are the foundations of modern organizations.

These organizations (aka the bureaucratic organization) were appropriate when changes in the markets, products and technologies were slow. In that case, efficiency was achieved by maintaining and imposing order, and by designing a predictable and structured environment (Rasulzada, 2007, p.18). In such organizations, the climate is conservative and creativity is perceived as a threat to the equilibrium.

A post-modern organization is grounded on an analysis of the organizational culture (awareness about this topic arose in the early 80’s with the publication of In Search of Excellence, Peters and Waterman, 1982). Post-modernity implies that Reason is not the unique way to structure an organization since it is relevant to the organization to take the “person”, the culture and the relationship between the external world and the internal world into account.

Furthermore, post-modernity is associated with the explosion of multimedia, the dissolution of the myths of progress and technology as saviours of humanity, the rising of individuality (Me, Myself and I) and the fading of authority as a central component for behaviours. In fact, the political, religious and academic authorities are dismissed altogether.

In its ethnocultural aspect, the post-modern organization, unlike the highly differentiated bureaucracy, relies on a “de-differentiated” form (see for example, Clegg, 1990, 1992, 2006, Boje et al ii, 1996). This refers to flexible specialization, post-fordism, niche-based marketing strategies, craft-oriented or multi-skilled work force, and a technical core of flexible manufacturing (Hassard, 1996, p.54).

Rather than stability, these organizations are looking for a constant disequilibrium, appealing for creativity, interdisciplinarity and innovation and rely on empowerment (giving relative power to everyone at his/her level in the organization), team work, trust, effective communication, increased commitment and flexibility (Jamali, Khoury, Sahyoun, 2006).

But generally speaking, either modern or post-modern, organizations are results-oriented. Leadership for results is now an emerging theme for training managers. For example, an Ohio State University Leadership Center (Leadershiplink, online) states “The leader’s attitude and behaviour are both key to achieving positive results. Leaders who value the input of all team members and encourage them to focus on results will regularly experience success. Focusing on results requires holding people
accountable”. In such a case, leaders utilize three key practices: stating expected results, monitoring actual results, and responding appropriately to results. The constant: being results-oriented.

A results-oriented organization designates champions out of high performers and publicly rewards them. As stated by Strickland (2006), “an environment is created which generates motivation to continue the high performance because of the direct tie between results and reward”. And she adds:

“High performance is a combination of culture, clear objectives, resources to achieve the objectives, commitment to the outcomes, and belief that performance/results lead to rewards. It also means that underperformance is addressed and those responsible are moved out of critical positions, possibly the organization itself.” [On line]

An example of results-oriented implementation at the university level: David Boje (2010, extract from his CV) reads like:

David’s total number of citations (3565 times) exceeds the average number of citations for the Organization Behavior/Management faculty at the top-ranked US school: a study of total citations at 51 major public and private business schools whose faculty had PhDs and as ranked in Business Week, US News and World Report, and the Financial Times, showed that the University of California-Berkeley topped the list of most-cited faculty with its OB/Management faculty having 1499 life-time citations on average by over50%. [On line]

As Henri Serieyx (1993) a well-known French writer on organization, remarks “we are moving from a complicated world in which Reason and predictability are the cornerstones to a complex world in which non causal linearity is apparent”.

The public sector has been going through major changes in the last 20 years. Since Margaret Thatcher’s revolution in 1985, the new public management (NPM) principles have been the buzz word for public administration. In one of the first books on the subject, Osborne and Gable (1991) pointed out that:

- What gets measured gets done;
- If you don’t measure results, you can’t tell success from failure;
- If you can’t see success, you can’t reward it;
- If you can’t reward success, you’re probably rewarding failure;
- If you can’t see success, you can’t learn from it;
- If you can’t recognize failure, you can’t correct it;
- If you can demonstrate results, you can win public support.

The new public management aims to increase the accountability and the transparency of organizations by instituting a results-oriented management and promoting competition between the public and the private sectors. In a context of downsizing, the workplace becomes more stressful with fewer possibilities for innovation and creativity. It is a state of compliance and submission. The working environment and real-life environment become opposites.
The cognitive dissonance process is shown through the difficulty of the workers to live by the standards of the organization and their own. Two consequences emerge.

First (see Karasek, 1989, 1990 and the followers), there is an increase in psychological pressures at work and a decrease in the decision-making latitude of the worker. This results in a high psychological strain for the workers. In reality, this is a closed-system orientation.

At the same time, workers are asked to follow procedures, work fast, and complete their assignments or mandates in specific ways, in one word: they have to be perfect. Perfectionism can be directed toward oneself (I want to be perfect), the others (I am looking for a perfect person) and it can also be socially oriented (the organization wants me to be perfect).

In that case, research shows that people are fearsome of negative evaluations; they believe in an external control; they have negative decision-making orientations and they need others’ approval. This stressful situation is associated with a wide variety of psychological problems such as depression, anxiety, suicidal tendencies and personality disorder (see Flett and Hewitt, 1996). It can become highly destructive for the whole personality (see Blatt, 1995).

In order to deal with work related stress, workers can either use avoidance strategies such as pull out of the organization or refuse to be promoted; they can also decide to cope with the stress by internally
lowering their expectations, their standards or by externally reducing the contact with the stress factors. They also can remove the stress factors by adopting innovative or creative strategies.

Some facts to illustrate these psychological consequences:

- According to the Treasury Board of Canada (2002), «workplace well-being» is a holistic approach to creating high-performance organizations through establishing the right conditions to generate high levels of employee engagement. Workplace well-being is connected to physical health, mental health and wellness but primarily, it emphasizes the social and psychological dimensions of three inter-related elements—workplace, workforce and the work people do. Some facts are enlighten in its report:

  **Missed Weekends:** Canadian Government executives work, on average, almost 5 hours each weekend. More than a quarter of executives work 6 or more hours each weekend.

  **Brain Drain:** 63% of retiring Government executives considers balancing work and personal life a very important factor in their decision to leave.

  **Upward Immobility:** For 51% of Government executives, problems with work/life balance were a very important reason for not seeking a promotion. In the labour force as a whole, this number is 32%.

  **Cheer Up:** Almost 2 out of every 5 Disability Insurance Plan claims in 1997/98 were due to depression or anxiety.

  **Heavy Load:** In 1999, almost half of all Canadian Public Servants considered their workload not reasonable most of the time: 40% could not complete their assigned workload during regular working hours most of the time; 65% reported a need to improve their time management skills.

  **Shabby Job:** Half of all Canadian Public Servants feel that their work often or always suffers because they are asked to do more with fewer resources, while 29% feel that their work often or always suffers because of unreasonable deadlines.

  **Problem with Authority:** Two thirds of Canadian organizations do not give their managers enough control to help employees balance work and personal responsibilities.

  **Gatekeepers:** Most Canadian organizations (57%) leave teleworking to the discretion of managers.

  **Balancing Act:** The percentage of workers reporting moderate to high levels of stress from balancing work and life responsibilities rose by almost 75%, from 27% in 1989 to 46% in 1999.

  **Emotional Overload:** Employees reporting high levels of depression more than doubled, from 15% in 1991 to 33% in 2001. In 1991, 1 in 5 workers reported high levels of job stress.
By 2001, 1 in 3 workers were reporting high levels. High levels of role overload increased over the period, from 47% to 58%.

**No Satisfaction:** The share of workers with high levels of job satisfaction declined from 61% to 43% between 1991 and 2001. During the same period, the share with high organizational commitment declined from 76% to 43%. The share with high levels of life satisfaction declined from 54% to 41%.

**This or That:** Three quarters of female workers feel that commitment to family hindered career advancement. Two thirds feel that advancement depends on putting their career ahead of their personal life.

**On Hold:** 41% of women report postponing having a child, or not having one at all.

- In interviews done with 200 Human Resource managers in private organizations, at the question: “What issue strikes fear into you most on a daily basis?” 37, 5% fears about retention issue: workers aren’t longer permanent; they move around and want to find “something” else. They are literally shopping for their job. At another question: “What type of employee terrifies you the most?” Zombies were the answer for 50% of the HR managers: the body (of the zombie) is there but the mind and dedication have left long ago.

In the general debate, some organizations choose one orientation or the other such as

- The University Council for Educational Administration (a US group of Professors and Researchers in Educational administration from approx 100 universities) published an article (Fall 2010) entitled “The 10 most wanted enemies of American Public Education’s School Leadership”. English (2010) cites 5 persons, politicians, business persons, well-known in the educational communities that he calls “the neo-liberals, free marketers, and the new public management gurus” He also cites 3 people who represents “the elitist conservatives fancy themselves as holding onto the cultural icons and heritage that they believe everyone should know and that constituted some cultural apogee or “golden days”. All of whom are having an interest in keeping a conservative approach or an open-market approach. The Association is in favour of the inclusive educational approach, centered on the child and part of the “No Child Left Behind” Policy promoted by the US Government (a similar approach was also adopted in the UK, Australia, Ontario and other parts of Canada).

Rasulzada (2007) considers that there are links between organizational climate for creativity, team climate for change and innovation, employee oriented leadership style, work resources and less workload: the higher these components were found, the higher the organization was rated as creative and innovative.

**CREATIVITY, AUTONOMY AND WELL-BEING**
Creativity generates something new and different. It is more than a reorganization or an addition of elements. It is a re-engineering of the component. For creativity to happen, one needs to be able to think outside of the box that is, to be a divergent thinker. But one also needs organizational support, freedom in ones actions, available resources, openness to challenges and few obstacles (such as conservatism or rigid formal management). Such an environment allows autonomy and well-being. It is an open-system orientation.

The pitfalls associated with creativity in an organization are related to uncertainty, risk, time-cost and apparent low productivity. Creativity is often associated to “rock the boat” treats, bullying, conflicts with colleagues and supervisor. It is perceived as the opposite of the status quo which represents an equilibrium and is as such, the entropy of a closed system.

According to the “European working conditions observatory” (2005), autonomy in the workplace is characterized by the capacity of the worker to be able to make decisions in one or another of those five aspects of his/her work: order of undertaken tasks, methods applying to ones work, speed or rate of work, quality assessment of his/her work and possibilities of solving unforeseen problems.

As shown in figure 2, the trends, for the past 10 years in Europe, show a small decrease in the autonomy related to order of tasks, speed and methods of work (Source: Fourth European Working Conditions Survey, 2005)

![Figure 2: Employees - are you able to choose or change...?](image)

For the same period of time, 60% of the workers (from 55% in 1995) work to tighter deadlines at least a quarter of their working time (European Foundation for the improvement of living and working conditions, 2010). A decrease in autonomy added to an increase of tight deadlines is indicators of a tendency towards closed systems.

The “European Foundation for the improvement of living and working conditions” (2010, p.6) states:

*For most workers (67%) in the EU27, the pace of work is set by direct demands from people – for example, interacting with a client. By contrast, only 18% of European workers have their pace of work set by the automatic speed of a machine, and this proportion has been decreasing over the past 15 years. Over the last 10 years, more workers report direct control by their boss as a determinant of their pace of work: this proportion has risen from 33% to 37%. The more factors workers have that set their pace of work – so-called ‘pace...*
determinants’ – the greater the demands put upon them, and hence the greater the potential is for work to have a negative impact on their health.² Workers in manufacturing experience twice as many pace determinants as do those in the services sector.

Specialisation, control and routine are suitable when a constant demand for standardised products applies. However, in a context of fast changing demand, these methods do not seem to work as well, and may lead to coordination problems and rigidities. Consequently, companies started to look for new forms of work organisation (Delarue and De Prins, 2004, In: the European Foundation for the improvement of living and working conditions, 2007, p. 4).

Enter the High Performance Working Organization: the HPWO³

According to Bauer (2004, p. 1), the main feature of High Performance Workplace Organizations (HPWO) is a transformation from an organization with a strong bureaucracy to a Holistic organization that features: flat hierarchical structures, job rotation, self-responsible teams, multi-tasking, greater involvement of lower-level employees in decision-making, and horizontal communication channels (as opposed to vertical ones in bureaucracies).

Being a HPWO means that companies can achieve higher flexibility, higher product quality, and higher performance while remaining cost competitive. Their strategy is to induce employees to work harder and to put to use the skills and information of their workers more effectively by moving decision authorities closer to those who have the relevant information (Bauer, 2004, p.1).

Comparison of workplace conditions by using the work-system index (measures of individual’s decision-making autonomy, the degree of horizontal and vertical communications, team-work, and job rotation), reveals that Denmark, Finland, Sweden, the UK, Ireland, Austria, the Netherlands, and Luxembourg show values that are above average while workers from Greece, Portugal, Spain, Italy and Germany show a relatively low involvement in flexible work systems (Bauer, 2004, p.11).

In a HPWO environment, individual workers have a say on the parameters of their work because they control their pace, methods and practice while being results-oriented. The Results Only Work Environment (ROWE) is a similar approach to workplace environment and workers well-being.

To summarize such approaches: the individual as an open system is respected in such organizations. He/She is able to transform data into useful decision-making information. There is margin for creativity and autonomy and above all, the decision-making process allows opportunities for a “locus of control” at the individual level. There is no alienation of the person by the organization even if it is still results-oriented and the individual has to strive for those results. These are performing organization since average well-being as indicated by job satisfaction measures is related to organizational performance across a range of industries, cultural contexts and performance indicators. (Daniels and Harris, 2000, p.307). This is undoubtedly in tune with von Bertalanffy’s line of thoughts.

² Underline by the author
³ This is a wink to von Bertalanffy’s section « Enter the Professor » in Robots, Men and Minds.
CONCLUSION

My conclusion is twofold.

First, when the public sector organizations introduced a results-oriented approach and accountability measures into their administration processes, they were confronted with a work structure that was not able to integrate such changes. They added these elements instead of reengineering the whole systems that is to say rethinking the organization chart, the reporting processes, the evaluation and monitoring processes, job assignment and job descriptions, and so on. In fact, processes from a post-modern organization were imposed on a modern organization.

Reshaping the organization involves an isomorphic process instead of an analogical process that is to say that the organization should examine its functional and structural laws and principles instead of importing laws and structures from another system and applying them directly. Reshaping an organization involves a paradigm shift from a Control/Reason paradigm to a Flexible/Intuitive paradigm. As stated by Serieyx (2010): *we are trying to solve tomorrow’s issues with yesterday’s tools.*

Post-modern organizations seem to offer conditions to workers that allow self-realization and actualisation, creativity and autonomy are essential tools for these organizations to flourish. The individual has ownership of his locus of control even if the organization is results-oriented.

But creativity and autonomy will eventually lead to the question of coordination, standardization and production. If organizations do not find a balance between those two issues, they will gradually move from a post-modern approach to a modern approach in order to maintain a certain control over their results.

Second, von Bertalanffy had a post-modern vision well before it was stated *per se* since his theory applied characteristics of living organisms to institutions and organizations. I am still convinced that his ideas are applicable nowadays and they seem quite verifiable considering the number of changes that happened since 1928. His theory helps understand the dynamics of organizations and particularly allows for openness and inclusiveness.

Finally, at least from his perspective, there is a future for oranges (systemic thinking) in a forest of broccolis (linear thinking)...
Bibliography


(note : to learn more : Seriyx, H. *Le big-bang des organisations*, Paris: Calman-Levy)