

## **A Practical, Contextual Social Science to Engage the World**

**Merrelyn Emery and Open Systems Theory**

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### **Update 2022**

Since this article was written my sister and I returned to the old Aboriginal camp out of Menindee for a reunion with some of the remaining inhabitants including Beryl Philp-Carmichael, better known as Aunty Beryl. The camp was abandoned in 1949 when we left and its native inhabitants were loaded onto trucks and trains and carried to Lake Cargelligo. They were the Ngiyampaa and Paakantyi peoples, now more simply called Nyampa and Barkindji. However some went bush and others returned to Menindee when they could. They are reconstructing a history of the old camp and still fighting for their land.

Because we were only kids when we left Menindee we never knew the name of the language we spoke or the culture we absorbed (and officially we were not supposed to know it). During this reunion we learnt that that language and culture was Nyampa, not Barkindji as I had guessed. Consequently, the original article has been corrected.

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<sup>1</sup> Philip Deering wrote the section on early influences.

## **Abstract**

Open Systems Theory (OST) as primarily developed by Fred and Merrelyn Emery in Australia provides an integrated set of concepts and constructs in both theory and practice to more accurately describe reality. A major part of the work is to research participative democratic structures, processes and governance as an alternative to dominant hierarchies. Much of the theoretical concepts and constructs were co-created by the pair, as evidenced by their many joint publications; so distinguishing their separate and unique contributions is not simple. However, Merrelyn Emery documents Fred Emery's contributions to the development of OST in this volume, and this chapter separates out Merrelyn Emery's unique contributions, including those since Fred's death in 1997. These include the recent evolutions of OST to deal with the big issues—like climate change. This chapter will first describe a bit about Merrelyn to give the reader a sense of the person, then will describe her early influences growing up with Aborigines in the bush in Australia, experiences that grounded her in an open systems thinking approach to life as a whole. Next, the chapter will describe her work on the tools, searching (1982) and participative design (1993); then it will address her work to confirm the foundations of OST as a social science through various statistical studies. Her work on the future of schools in the first decade of this century captures the beginning of pushing the theory beyond the 20<sup>th</sup> century. The chapter will conclude with some new insights and the ongoing evolution of OST into the future.

## **Introduction**

Merrelyn is a consummate social scientist, and her contributions are consistently evidence-based on action research with organizations and communities, transdisciplinary literature and statistics—as is all of open systems theory (OST). For many years after Fred Emery returned to Australia from the Norwegian Industrial Democracy Project (1962–1967), the two together further developed OST and the methodologies and tools for practitioners as

“barefoot social scientists” (M. Emery, 1982). They were academics in the Department of Continuing Education and their teaching responsibilities and research were in the field. Merrelyn Emery is the author or coauthor of seven books, eight edited books, 35 book chapters and 60 journal articles. In addition, she has contributed 29 institutional research reports including several national studies (e.g. Project Australia, the National Telecom Study, Workplace Australia and Future Directions) and additional miscellaneous professional contributions. This chapter only mentions a few of her many highly significant contributions.

Merrelyn is a wonderful, hard-working and rigorous colleague who is always willing to support efforts in practice and in theory development. She and Fred Emery put the development of OST first in their partnership because they really saw the need to aid humanity in adapting to a changing world. She worked hard day and night and was not only deeply respected, but also loved by many of her students, mentees and colleagues. Insightful and willing to take risks, she and everyone around her—including client systems—learned quickly.

More generally, she has been, and continues to be an enthusiastic advocate for and practitioner of action research, applying OST’s theory and ideals in practice with many different groups to see projects through to successful long-term implementation. An example is her work in the Torres Strait Islands that recovered the traditional culture of the Islanders (Paton & M. Emery, 1996), validating the anthropological evidence in *Searching* (1982) that the ancient cultures were predominantly participative democratic.

At the same time, Merrelyn Emery regularly expresses distaste for and actively argues against theories and theorists that ignore the scientific method, empirical data, logic and human experience. Finally, she has been uncompromising and consistent in contributing to OST which is viewed as a genuine and viable alternative to the more traditional approach of closed systems, including reductionism and human relations.

## **Influences and Motivations: Early encounters with open systems**

*My father did not enforce the speaking of English in the school on the camp, and I was allowed to run wild with the Aboriginal kids. I consider myself to have been privileged to have spoken an Aboriginal language when I was a kid, unfortunately lost now, although I know it is still there, as I have dreamt in it occasionally. I credit it for a lot of my intellectual flexibility and understanding (Emery, personal communication, Nov. 30, 2015).*

Born in 1940, Merrelyn grew up in the red-desert mining town of Broken Hill and on the Aboriginal camp out of Menindee on the Darling-River, New South Wales, Australia. Her parents – both teachers with a Celtic heritage – raised her in a matriarchal, democratic family. She was free to read anything, experiment with anything, and play with and learn from anyone. Her father prioritized life and learning above convention. She learned the Barkindji language of her river-people classmates. Merrelyn’s liberal upbringing allowed her mind to experience thought beyond the limits of English hierarchic-systems thinking to include the collaborative-systems thinking of the Barkindji. Extensive and continuing research has concluded that peoples from oral cultures had large vocabularies and great flexibility of mind (e.g. Lounsbury, 1953; Chafe, 1994; Baker, 2001). Is it possible that Merrelyn had an early introduction to open systems?

Many anthropologists have acknowledged Australia’s Aboriginal peoples as one of the most peaceful ancient cultures, a theme Emery explored in *Searching* (1982). The level of their pre neolithic-agricultural revolutionary thinking easily compares with the level of Homer’s pre-alphabetic revolutionary thinking and could certainly be the source not only of Emery’s intellectual flexibility, but also her intuitive understanding of open systems and the second design principle that underlies participative democratic structures. By speaking Barkindji and growing up in the bush, she was primed to push the boundaries of OST.

What motivated Merrelyn Emery to subsequently pursue the work of one particular set of researchers while outright rejecting the work of others? Various forms of evidence from all around the world support the theory that there was an old, predominantly global participative democratic culture—albeit one that took slightly different forms in different areas—until the beginnings of the industrial revolution (M. Emery, 1982). Pockets of these cultures—such as

the Australian Aborigines and the Mohawk in North America—have survived. Although most people intuitively return to collaboration when disaster strikes or other special circumstances are warranted, the absence of daily collaborative experiences in twentieth-century settings such as compulsory-education environments, featuring the dominance of the teacher over the learner, often inhibited the natural development of systems thinking. This did not happen with Merrelyn Emery. Through free use of the Barkindji language, Emery had access to the framework of pre-plough-agriculture collaborative organizational system thinking literature. Emery would have experienced the rational thought of the Barkindji and easily concluded that rational thought is a natural attribute of all humans, rather than something needing to be learned in a hierarchic way from a Western body of knowledge.

### ***Early Academic Influences***

She took advantage of the advent of national free tertiary education and attended the University of New England (UNE) in Armidale, home to a small collegial environment that encouraged free enquiry. As a first-year medical student, she quickly developed a love for developmental, clinical, and social psychology, so she switched from science to the arts to obtain a Bachelor of Arts Degree in psychology (1960). She accepted a three-year teaching scholarship, only to abort this career path after three weeks of practice teaching. She “chucked it because I couldn't stand the system” (Emery, personal communication, Jan. 18, 2016). She thereafter returned to UNE to pursue further studies in psychology (1964 BA Honours I Psychology). In 1986, she earned a PhD for work on the neurophysiological effects of TV.

### ***The Influence of Systems Thinkers***

Following a number of part- and full-time positions in education research and psychology at both UNE and the Australian National University in Canberra – where she met Fred Emery in 1969 – Merrelyn Emery landed an appointment at the ANU Center for Continuing Education in 1970. Fred Emery later transferred there. The opportunity to read a proof copy of *On Purposeful Systems* (Ackoff & F. Emery, 1972) provided answers to questions like:

Why is the world – and its organizations – crazy? I realized why I had appreciated work such as Gestaltists, Lewin, Lippitt and White, 1939; Bion, 1952; Bion,

1961; Angyal, 1941; and Angyal, 1965, and totally rejected theories such as behaviorism (M. Emery, personal communication, Jan. 18, 2016).

Earlier editions of *On Purposeful Systems* had been published as *Psychologistics* (Churchman & Ackoff, 1947) and *Choice, Communication, and Conflict* (Ackoff, 1967). This trilogy was a continuation and extension of work begun by University of Pennsylvania psychology professor E. A. Singer Jr., who embraced the philosophy of pragmatism that had been developed by Charles Sanders Peirce and which had roots in indigenous tradition (Collier, 1946; Pratt, 2002; Mohawk, 2004). Singer's vision was to integrate siloes of scientific knowledge into a more powerful scientific understanding of reality that could then be applied to fields such as psychology and other human sciences. Fred Emery's addition to the mix of authors introduced his long concern with open and sociotechnical systems and an appreciation of Gerd Sommerhoff's (1969) work on purposeful systems (see chapter on Emery in this volume).

Fred Emery's influence can also be found in “educational paradigms,” a key chapter in Merrelyn Emery's *Participative Design for Participative Democracy* (1993). The methods it described and explained are like everything in OST: Concerned with learning rather than teaching and understanding rather than merely receiving. Educational paradigms explicated the theory of ecological learning – that form of learning which all people have been using since the beginning, long before the advent of the Western education system (see also the chapter on Emery in this volume). In this chapter, Fred Emery observed how Noam Chomsky's theory of an evolutionary-developed Language Acquisition Device (LAD) was used to destroy the arguments of leading education reformers. But Chomsky never had an empirical basis for a LAD nor was there an evolutionary path for the creation of such a device (Deacon, 1997; Golumbia, 2013). What can be empirically supported is that all humans are born with the gift of learning about our world from direct perception as well as sharing and collectively developing further meaning from it.

### ***Conclusion***

In the words that the Baron de Lahontan attributed to Adario, the Huron diplomat who was centrally involved in the Great Peace of Montreal of 1701:

To be enlightened by those holy Scriptures you and your Jesuits are endlessly quoting to us, it is first necessary to have this blind Faith with which the good fathers stun us with at every moment. The Great Spirit has

willed you born in France so that your eyes and your Reason be of no use to you. He has made me born Huron and believe only what I can see and understand (Sioui, 1992, pp. 69–70).

As with blind faith in Holy Scriptures, unquestioning faith in axiom-based theories does not produce sound educational philosophy. The development of OST by both Emerys proceeded on the implicit and explicit acknowledgement and use of ecological learning, one of the concepts that so starkly delineates OST from its closed system alternatives.

At “the first recorded treaty session” in Three Rivers, Quebec in 1645, the Mohawk speaker – Kiotseaeton – proposed peace to the sieur de Montmagny, the first governor of New France. He said, “We will put an entirely new sun in the sky.” So different is OST in its concepts and practice that it amounts to putting an entirely new sun in the sky. Merrelyn Emery's contribution to OST, documented below, owes much to her experience with those whose whole lives were a testament to minds that interact with their environment and who were capable of putting new suns in the sky.

### **Key Contributions – Securing the Foundation of Open Systems Theory and Practice**

Merrelyn and Fred co-created an OST that has been widely recognized around the world as significantly changing how we see and understand systems—not just social systems, but all systems including the biological (Emery M, 2003), as open to their environments, that is, with permeable boundaries. This section will discuss some of Merrelyn’s major contributions to this new social science.

The version of open systems theory developed primarily by Fred Emery, OST, has two main purposes. The first is to promote and create change toward a world that is consciously designed by people, and for people, living harmoniously within their ecological systems, both physical and social. “Socioecology” captures the notion of people-in-environments. Included within this is the concept of open, jointly optimized, sociotechnical (and sociopsychological) systems, optimizing human purposefulness and creativity, and the best options afforded by changing technologies. Again, these organizational systems are designed by the people themselves. The second purpose is to develop an internally consistent conceptual framework or social science, within which each component is

operationally defined and hypotheses are testable so that the knowledge required to support the first purpose is created. OST develops from integrated theory and practice where the practice involves important human concerns, societal and organizational (Emery M, 2000).

I met Merrelyn Emery and Fred Emery in the late 1970s when I was manager of Organization Development (OD) at an Ontario supermarket chain that was using OST to redesign the organizational structure in its stores (Alon & de Guerre, 1984). Many years later, Merrelyn Emery was the external examiner for my PhD study of a six-year action research project involving organizational and environmental change that successfully attracted billions of dollars of new investment in the Athabasca Oilsands (de Guerre, 2000). So I have known Merrelyn's contributions as both a practitioner and more recently as a professor at Concordia University in Montreal, where I was employed after my work in the Oilsands.

### *Clarifying Concepts & Contexts*

Perhaps Merrelyn will be remembered for her extensive conceptualization, contextualization and development of the search conference methodology reported in *Searching: For New Directions, in New Ways, For New Times* (M. Emery, 1982) and then in the classic text on OST, *Searching: The Theory and Practice of Cultural Change* (M. Emery, 1999). These two books highlight a chronological series of publications that clearly document the development of the search conference as a reliable tool for participative democratic learning, planning and policymaking.

In 1982 she established the reality of Emery & Trist's (1965) stages of causal texturing, the historical context of OST, by exploring through ancient and recent cultures the dimensions of oral and literate, matriarchal and patriarchal, life and externality centred. Anthropological evidence confirms that the ancient matriarchal, oral cultures were correlated with equality of status and participative democratic structures, caring for people and planet. These cultures used and thus embodied the design principles and ideals OST has (re)discovered are one basis of active adaptation. They illustrate just how far into behaviour and culture the effects of the design principles reach.

The first design principle (DP1) produces a hierarchy of personal dominance that generates negative affect and poor human relations. The second (DP2) produces a hierarchy of functions or skills that generates positive affect, good human relations, and resultant productivity, innovation and human well-being.<sup>2</sup> It is only in DP2 that ideals are elicited. Her extensive review of historical contexts shows their effects are widespread and by studying it, one understands searching as a natural learning process, that which results from making the choice between the two principles—and the culture that flows from the second—toward systems and patterns of behavior that are joyous and wise, not competitive and disturbed.

Having explored cultural contexts in part 1, she is then able to develop a heuristic theory of diffusive learning, critical for the success of any new idea or practice. The Norwegian Industrial Democracy Project failed to diffuse across Norway as expected. Why? Why was the next development in nearby Sweden at Volvo? What was wrong with the theory? Answering these questions became a priority.

Merrelyn first reviewed current theories of diffusion and then by combining many concepts including open vs. closed systems, Pepper's (1942) world hypotheses, Tomkins (1962) affect theory, Asch's (1952) theory of effective communication and Chein's theory of motivation, developed a model of diffusion as "learning to act wisely". Consequently:

Diffusion is increased as the design and management of these learning events become congruent with their purposes and environmental trends. Structures and processes which encourage learning through working participatively are a precondition for the appearance of the motivation to diffuse. Behind these factors lies the affect system, and it is argued that the key to effective diffusion is the generation of the positive affects of excitement and joy. "The joy of learning" which produces diffusion contrasts with group assumptions and a "hatred of learning" which is often the result of traditional teaching (M. Emery, 1986, p. 411).

Because the method used in the Norwegian ID Project was expert-driven, top-down and based around demonstration sites, it contained none of the conditions required to produce the motivation to diffuse and suffered the same fate of encapsulation and paradoxical inhibition as previous similar examples—namely, no diffusion (Emery, 1986, p. 414).

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<sup>2</sup> The design principles are described in more detail in the chapter on Fred Emery in this volume.

In Part 3 of the 1982 book on searching, Emery also provided a clear early view of the then-OST tools, Search Conferencing and the Participative Design Workshop. But the 1982 version of searching has been superseded by the 1999 version, as OST keeps evolving.

### ***Expanding Practice: Variations of the Participative Design Workshop***

In addition to her work on searching, a second major contribution was working out and testing elaborations of the Participative Design Workshop to cover the contingencies of organizational diversity and moving the focus to design and redesign of the whole organization (M. Emery, ed. 1993). The Norwegian Industrial Democracy Project thoroughly tested sociotechnical systems and established it as an alternative to autocracy in the workplace. But its method was inappropriate for diffusion.

When Fred Emery returned to Australia, he knew a radically different method was required for diffusion as the time for proof was over. What emerged was the method called “participative design.” As the name implies, the people who live or work in the organization redesign their own organization or section. The social scientists (experts) brief them on the design principles, their effects and some basic practicalities to make the new design work.

One of the advantages of the new “do-it-yourself” method was that it became easier to change the design principle organization-wide; in other words, to create self-managing organizations (Purser & Cabana, 1998), not just self-managing groups. Self-managing groups are the building block of democratic organizational structures, and all levels of the organization must apply the democratic design principle to create a self-managing organization. Merrelyn established the basic varieties of architecture at the sectional and organizational levels that would work in practice.

### ***Developing and Disseminating the Science: Statistical Tools and Training***

During the late 1990s, Merrelyn developed an organizational health and innovation questionnaire that can be used by any organization to show its health status. It can suggest a strategy for the introduction of participative design and by comparison with a database from participating organizations shows risk relative to others.

Elaborating this questionnaire to include mental health, a Canadian and Australia research team clearly and quantitatively established that the second design principle creates

organizational structures that are mentally healthy as well as humane and effective places to work (de Guerre, M. Emery, Aughton & Trull, 2008).

Figure 1 shows a high level view of the causal path discovered in the above study. It demonstrates that the critical intervention is the choice of the second design principle and the resultant self-managing organizational structure. This choice leads to a set of basic psychological factors that are the intrinsic motivators (detailed in the chapter on Fred Emery) which, in turn, lead to a set of enabling conditions that include good human relations, high trust and positive affect at work. This then leads to a set of outcomes that include high productivity and quality, healthy people (both physical and mental), as well as innovation and creativity.

Good outcomes for both people and for the organization come from the same set of conditions.



Figure 1: High Level Causal Path to Healthy Innovative Learning Organization (de Guerre, Emery, Aughton & Trull, 2008).

This study confirmed the finding of Trist & Bamforth (1951) that jointly optimized sociotechnical systems structures based on the second design principle are the primary determinant of mental health.

In 2000, Merrelyn published the first quantitative picture of an organization in its environment from qualitative search conference data drawn from all parts of the event (Alvarez & Emery, 2000). Using search conference environmental scans from 1993–2009 and building on the work done for Project Australia (F. Emery & M. Emery, 1979) she generated a picture of longitudinal social change and the implications for our future (Emery, 2013). These statistical studies have demonstrated that qualitative data gathered from participative events such as the search Conference can be translated into rigorous statistical analyses. They have also confirmed basic findings from branches of social science that were previously only documented in qualitative or patchy quantitative form. As such, they help to corroborate some long-standing results.

She also initiated and developed an integrated theory and practice six-day training program to introduce OST, plus workshops for more advanced students and for systemic statistics. Hundreds of OST practitioners in the United States, Canada, Mexico, New Zealand and Australia have learnt OST in these workshops.

### ***The Two-Stage Model and the Future of Schools***

Merrelyn developed the two-stage model of active adaptation, a basic purpose of OST, to ensure successful implementation and sustainable diffusion of the outputs of other OST methods. These include not only several types of search conferences (Emery M, 1999) but also the third OST tool, unique designs (UD), for everything that is not strategic planning or structural design, such as problem-solving (Emery & de Guerre, 2007).

OST is vitally concerned with establishing active adaptation between system and environment as discussed in the chapter on Fred Emery. But until Merrelyn started work on the two-stage model of active socio-ecological adaptation as shown in Figure 2 (Emery & de Guerre, 2007, p. 247), the theory was incomplete and, therefore, the practical work based on it was not always successful (Emery M, 1999, pp.17-22).

The first stage of the complete model is focused on strategic planning to establish a directive correlation between the external environment and the organization. The second is focused on developing the organizational capacity to deliver on the strategy identified in the

first stage. That second stage establishes the directive correlation between the organizational structure and the people within it thus completing the adaptation and ensuring it is active.

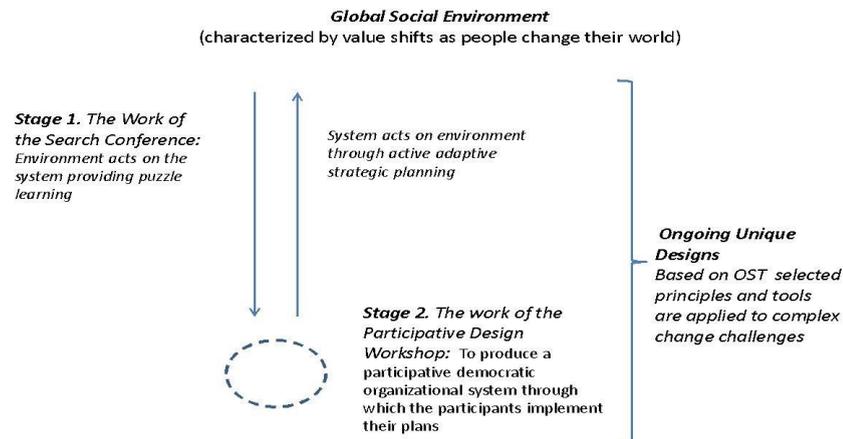


Figure 2: The two-stage model of active adaptation

The model, reproduced here in Figure 2, shows that while building a directive correlation between the organization’s strategic direction and the environment is the job of the search conference, it is the job of the participative design workshop (PDW) to create an organization that is flexible, adaptive and agile enough to carry out that plan in today’s turbulent environments—that is, it has adopted the second design principle so that the organization is adapted to its people. The PDW required to accomplish the second stage is a modified version of the original as in this case, a structure is being created from scratch, not redesigned.

The creative application of these three tools (SC, PDW and UD) in an organizational change process creates innovative, sustainable organizations that are actively adaptive (constantly informally redesigning) to the turbulent, complex environments of today. Recently, Merrelyn also demonstrated the practical application of the two-stage model to national and international systemic issues such as the future of schools (Emery, 2006), the future of Australia (Emery & Aughton, 2008), and global climate change (Emery, 2014).

Perhaps the future of schools is her greatest contribution? In 2006 Merrelyn developed an open systems approach to systemic change of the educational system in the western world.

Mapping this is very complex, because it involves open systems within open systems: Purposeful people in a school district in a community in the larger social environment with all the two-way systemic transactions between these major components (Emery, 2006). While they may look just like organizations, schools are embedded within and a vital part of their communities, meaning that they are also community entities.

Schools physically exist within, and are often a central focus of, a community ... The future of students is intimately intertwined with the future of their community ... Schools are publicly funded and local communities invest their own money, sometimes heavily, in procuring additional resources for schools and children ... Schools reflect and transmit the culture of their communities across the generations, preserving its unique features ... Parents and teachers are usually members of the community and are richly networked with a range of other community organizations, businesses and interest groups ... A child's home is the most powerful influence on that child's life and learning (Coleman, 1966) and "continued parental involvement throughout a child's years of schooling has a strong positive impact on learning" (NFIE, 2000, p.151). (M. Emery, 2006, pp. 3–4).

Schools are also sociopsychological systems—people to people— rather than sociotechnical systems – people to technology - while in the western world, the paradigm of education in use is mechanistic, designed on the first principle. So change of several different open systems— and not just a change of structure, but also change in the educational paradigm—is required. Emery identified three interlocking components and eight steps of change required to change a school district:

1. The involvement of the community as an owner and contributor to school districts (steps 1–5),
2. The reorganization of staff and student structures (steps 6 and 7), and
3. Balancing teaching and learning (or changing the educational paradigm) (Step 8) (M. Emery, 2006).

This new education system holds the promise of reducing the gap in social class that lies behind differences in student achievement. This is something that could be implemented now or in a future that emphasizes ecological learning (M. Emery, 2006). While I have not been able to do justice to Emery's work in this space, I hope that the utility of OST and its methods to deal with the big issues is evident.

### **New Insights – Extending and Advancing Open Systems Theory**

The first insight and the first theorem of OST is that all open systems are in a constant two-way exchange with their environments (Emery & Trist, 1965). (This sounds so simple,

and yet it took me years to comprehend). The minimal necessary and sufficient parameters of open systems required to characterize any system and/or any environment are four: The relations within the environment that emerge as embryos of change from interactions within the environment itself; the interdependencies within the system that make it what it is; and that the transactions between the system and environment are two-way.

Without characterizing the environment within which the system is embedded, you cannot say you are working with an open system. Without attention to the environment, the system is trying to act as if it is closed. In closed systems thinking, the system still has to plan to deal with and contain the occasional perturbation that comes from the environment, but as the environment itself is not characterized and understood, proposing opportunities and constraints is merely guesswork.

Once the significance of the external environment impacting on the organization is understood, it leads to an obvious key insight for organizational change practitioners. Since organizations are open systems, and understanding of any open system also requires understanding the social environment that the system is within, the unit of analysis and design for organizational change is the organization-in-environment. This means that for reliable and sustainable change, one has to also characterize the task environment of the organization, the level of environment between the system and the global extended social field.

We have demonstrated that healthy innovative organizations are based on the second design principle (de Guerre, Emery, Aughton & Trull, 2008). In other words, sustainable organizational change is a holistic structural change, or the becoming of a self-managing organization. Several years ago, it was a major insight for me to discover that because structure affects behavior, self-management involves a systemic structure, not just human relations or trying to change human behaviour such as communication. However, for many, this is still a difficult concept to grasp.

For me, the second part of this insight is that when we change the design principle, we change the whole organization—not just the primary sociotechnical or sociopsychological production system. Thus, the term “self-managing organization,” in addition to “self-managing team,” emerged in practice and was clarified by Purser and Cabana (1998).

These insights affected my practice to such an extent that I have used the two-stage model of active socio-ecological adaptation in all of my work since the 1990s. Even at a department level redesign, it is useful to start with a search conference to connect people, build trust and have everyone understand what changes in the organizational environment are driving the organizational changes they need to examine. When this is done well, people are ready to fully and ethically engage in changing the organization design principle, which will affect everyone. The two-stage model is also useful for greenfield organization design, for large capital project design, and for the design of networks and social innovation ecosystems.

### **Legacies and Unfinished Business: As the World Changes, so too Does OST**

A system organized around this second design principle provides the conditions needed for the individuals within it to attain a higher level of system function than the system itself. Thus a design principle two or democratic organization can mobilize the human potential for ideal seeking rather than merely purposeful behavior (Emery, M., 1997, cited in de Guerre, 1998).

Fred Emery died in April 1997, just as Merrelyn was publishing *Searching*. I wrote a retrospective that concluded, “Fred Emery gave us three gifts: The second design principle, the tools to use to get there, and sortition<sup>3</sup>. The challenge remaining is to create a democratic society that can mobilize the human potential for ideal-seeking rather than merely purposeful behaviour (de Guerre, 1998).” Looking back from what I know today, my view of Emery’s contribution at that time was quite limited. Similarly, I am sure that in a few years, I will feel the same way about my efforts herein. Merrelyn Emery has worked very hard to complete OST—to round out its methods and to apply it to larger socio-ecological systems—and I have the privilege of understanding some of what she has accomplished, but I will probably not truly grasp it for many years. That is the nature of a leading edge scholar/thinker.

Search conferencing has been used around the world by both researchers (Baburoglu, 1988) and practitioners and has been modified, sometimes regressively, to produce

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<sup>3</sup> The action of selecting or determining something by the casting or drawing of lots. In *Toward Real Democracy* Fred Emery (1989) develops sortition as a governance system. Alternately called “the jury system.” He points out that we use sortition to select a jury that will deal with complex issues, so why not for governance.

subsequent methods such as future search (Weisbord & Janoff, 1988) and scenarios planning (van der Heiden, 1996). Many of the large group methods in use today credit OST as the roots of the new method (Holman, Devane & Cady, 2007). Similarly, participative design has been used for greenfield design and redesign on several continents, including South America, North America, India, Europe, South Africa, Australia, Turkey, Australia and the Pacific. It has been applied in education, health, government, civil society and many industrial sectors.

One of the troubles is that OST action researchers and practitioners do not publish enough, preferring instead to be actively engaged. Nevertheless, Merrelyn continues to pursue new methods and new knowledge, and to rigorously report them on a regular basis—but she publishes only that which adds to social science knowledge, not the routine applications and the issues in the field for practitioners. I think we need some way to capture the practice, and encouraging practitioners to write more might help.

Another problem is that OST is largely unknown or ignored in North America, and consequently, there is not a lot of critique—which would help the theory and practice grow and develop more fully. One particularly significant exchange that occurred with Mari Kira and Frans van Eijnatten (2008; 2010; 2011), M. Emery (2010) was extremely valuable for those who followed it. The field as a whole could use more research comparing and contrasting various systems theories and paradigms.

There is a lot of unfinished business. While the basic framework of OST has proven to be valid and reliable to explain and predict organizational change, there is a lot yet to be learned. There are many amazing pieces of work in social science that OST could illuminate. This needs to be done if the second objective of OST—to develop a social science to back up the first goal of creating a better world—is to be achieved. In addition, OST can also illuminate the natural sciences, such as biology (M. Emery, 2003). Biologists are learning that the genes, for example, are open systems and that we can influence our genes by influencing their environment. Much more work to assist natural science by using social science research could help build the socio-ecological awareness and knowledge we need to deal with global climate change, for example. Emery is now working on a new book to clearly define OST as the open systems science it has always been (personal communication, April 8, 2016).

For practitioners, there is more work to do to apply OST to larger systems and wicked problems. Emery (2012) outlines a national and international change process to solve Global Climate Change. This social change process uses the two-stage model of active socio-ecological adaptation starting at the local level and working up to the national and then international levels. Further development and testing of the application of this model to interorganizational change and development and to the development of social innovation ecosystems to challenge the big issues at the local and perhaps regional level should be funded action research projects.

In *From Tunisia to Occupy and Beyond: The New Wave of Social Change, Past, Present and Future* (Emery, 2013), Merrelyn demonstrated how OST can explain and predict social change:

The analysis is based on well documented historical sources and data obtained from the first hand perceptions of hundreds of people around the world who attended Search Conferences (Fig. 8.3) in 2004-2009. Their perceptions, elicited by the question, “ what have you seen happen in the last 5-7 years around the world that has struck you as new or novel?” are a record of the changes in the L22 that took place during that period. In other words, they are a record of the significant and indicative changes of recent value shifts and social change. These perceptions were recorded verbatim and coded according to the OST taxonomy of ideals and maladaptions (Emery, 2013, p. 203).

This use of search conferencing as a large group research tool should be replicated repeatedly to gather more data from other regions of the world to help policymakers and change makers learn, understand and plan better interventions. There remain a million practical problems to solve, and each one holds the potential of a new conceptual insight. OST has always been focused on practical reality, and all of its concepts and constructs have been tested and retested in practice. That is the history and promise of OST.

### **References and Further Reading**

Ackoff, Russell L. (1967). "*Choice, communication, and conflict: A system's approach to the study of human behavior.*" Unpublished research work, University of Pennsylvania.

ERIC Number ED024055. (see also)

[http://cybertrails.org/ACK\\_Choice,%20Communication%20and%20Conflict\\_PB178335.pd](http://cybertrails.org/ACK_Choice,%20Communication%20and%20Conflict_PB178335.pd)

Ackoff, Russell L. (2006). "Why few organizations adopt systems thinking?" *Systems Research and Behavioral Science*. vol. 23, pp. 705–708.

Ackoff, Russell L. and Emery, Fred E. (1972). *On Purposeful Systems: An Interdisciplinary Analysis of Individual and Social Behavior as a System of Purposeful Event*. Chicago: Aldine-Atherton.

Alon, A., & de Guerre, D. (1984). Measuring the effect of an Organizational Intervention. In J. B. Cunningham & T. H. White (Eds.), *Quality of Working Life: Contemporary Cases (pp. 231-251)*. Ottawa: Labour Canada.

Alvarez, R. & Emery, M. (2000). From Action Research to Systems in Environments: A Method. *Systemic Practice and Action Research* 13(5) 683-704.

Asch S E. 1952. *Social psychology*. Prentice Hall.

Baburoglu, O. (1988). The Vortical Environment: The Fifth in the Emery-Trist Levels of Organizational Environments. *Human Relations* , 41(3): 181-210 Baker,

Mark C. (2001). *The Atoms of Language*. New York: Basic Books.

Bion, W. R. (1961). *Experiences in groups*. London: Tavistock.

Bottenberg, (1998). "*LUCC 333: Interdisciplinary Approaches to the Study of Peace*." Class lecture, Concordia University (Montreal).

Chafe, Wallace (1961). *Seneca thanksgiving rituals*. Washington, DC: Bureau of American Ethnology.

Chafe, Wallace (1994). *Discourse, consciousness, and time: The flow and displacement of conscious experience in speaking and writing*. Chicago: University of Chicago Press

Chein, Isidor. 1972. *The science of behaviour and the image of man*. Basic Books

Churchman, C. West and Ackoff, Russell L. (1947). *Psychologistics*. Philadelphia: University of Pennsylvania.

Collier, John (1945). "United States Indian Administration as a laboratory of ethnic relations." *Social Research* vol. 12, pp. 265-303

Collier, John (1947). *The Indians of the Americas*. New York: W. W. Norton.

Deacon, Terrence William (1997). *The symbolic species: The coevolution of language and the brain*. New York: W. W. Norton.

de Guerre, Don (1998). Three Gifts and a Challenge: A Retrospective for Fred Emery. *Futures*, 30(6): 573-578 de Guerre, D. W. (2000). The Co-determination of Cultural

Change over Time.

*Systemic Practice and Action Research*, 13(5), 645-663.

de Guerre, D. W., Emery, M., Aughton, P., and Trull, Andrew. (2008). Structure Underlies Other Organizational Determinants of Mental Health: Recent Results Confirm Early Sociotechnical Systems Research. *Systemic Practice and Action Research* 21(8): 359-379.

Emery, F. E. (1967b). The nine-step model. In Trist, Eric & Murray, Hugh (Eds.). *The social engagement of social science: A Tavistock Anthology*. Vol. 2 (pp. 567–579). Philadelphia: University of Pennsylvania Press

Emery, F. E. (1976). Causal path analysis. In F. E. Emery (Ed.) (1981). *Systems thinking Vol. 1*. (pp. 293-298) Harmondsworth: Penguin.

Emery, F. E. (1989). *Toward real democracy and towards real democracy: Further problems*. Toronto. Ontario Ministry of Labour.

Emery, F.E. (1994). Some observations on workplace reform: The Australian Experience. *International Journal of Employment Studies*. 2(2) 327-342.

Emery, M (1982). *Searching: for New Directions, in New Ways, for New Times*. Canberra, Centre for Continuing Education, Australian National University.

- Emery, M (1986). Toward an Heuristic Theory of Diffusion. *Human Relations* 39(5):411-432.
- Emery, M. (Ed.). (1993). *Participative design for participative democracy*. Canberra: ANU/CCE.
- Emery, M. (1997). Forthcoming. *Searching: The theory and practice of making cultural change*. Philadelphia, John Benjamins.
- Emery M (1999) *Searching: the theory and practice of making cultural change*. John Benjamins, Philadelphia.
- Emery M (2000) The current version of Emery's open systems theory. *Systemic Practice and Action Research* 13(5):685–703.
- Emery, Merrelyn. (2006). *The future of schools: How communities and staff can transform their school districts*. Lanham, MD: Rowman & Littlefield Education
- Emery, M. (2008). The Determinants of Creativity and Innovation at Work. Unpublished Manuscript [www.thelightonthehill.com](http://www.thelightonthehill.com)
- Emery M. 2010. Refutation of Kira & van Eijnatten's critique of the Emery's open systems theory. *Systems Research and Behavioral Science* 27: 697–712.
- Emery, M. (2013). From Tunisia to occupy and beyond: The new wave of social change, past, present and future. In Jaworski, Jared A (Ed), *Advances in Sociology Research*, 14. 1-67.
- Emery, M. (2013). Open or closed systems? Bridging the gap. *Systema: connecting matter, life, culture and technology*. Vol 1, No 2, 3-19.
- Emery, M. and Aughton, P. (2006). *Organizational Health and Innovation Survey*. Melbourne: Amerin.
- Emery, M & Aughton, P. (2008). Submission to Review of the National Innovation

System. Available from lead author and Secretariat.InnovationSystems@innovation.gov.au.

Emery M, and de Guerre D (2006) Evolutions of open systems theory. In: Holman P, Devane T, Cady SH (eds). *The change handbook: the definitive resource on today's best methods for engaging whole systems*, 2nd edn. Berrett-Koehler, San Francisco, pp 24–249.

Emery, F. & Emery, M. (1974). Participative design: work and community life. In *Participative Design for Participative Democracy* (pp. 100--122). Canberra: Centre for Continuing Education, ANU.

Emery, F. and Emery, M. (1979). Project Australia: Its chances. In E. Trist and H. Murray (Eds.). *The social engagement of social science: A Tavistock anthology: Vol 3* (1997) pp. 336-353. Philadelphia: University of Pennsylvania Press.

Emery, F., & Thorsrud, E. (1969). *Form and content in industrial democracy*, London, Tavistock.

Emery, F., & Thorsrud, E. (1976). *Democracy at work*. Leiden. Martinus Nijhoff Social Sciences division.

Foster, Michael K. (1974). *From the earth to beyond the sky: An ethnographic approach to four Longhouse Iroquois speech events*. Ottawa: National Museums of Canada

Frye, Northrup (1982). *The great code: the Bible and literature*. Toronto: Academic Press Canada.

Golumbia, David (2015). "The language of science and the science of language: Chomsky's Cartesianism" *Diacritics*, vol. 43, no. 1, pp. 38-62

Holman P, Devane T, and Cady S H (eds). (2006). *The Change Handbook: The definitive resource on today's best methods for engaging whole systems*, 2nd edn. Berrett-Koehler, San Francisco.

Kira M, van Eijnatten FM. 2008. Socially sustainable work organizations: a chaordic systems approach. *Systems Research and Behavioral Science* 25: 743–756.

Kira M, van Eijnatten FM. 2010. Socially sustainable work organizations and systems thinking. *Systems Research and Behavioral Science* 27: 713–721.

Kira M, van Eijnatten FM. 2011. Socially sustainable work organizations and world views. *Systems Research and Behavioral Science* 28, 418–421.

Lord, Albert B. (1960). *The Singer of Tales*. Cambridge, MA: Harvard Univ. Press.

Lord, Albert B. (1987). "Characteristics of Orality." *A Festschrift for Walter J. Ong, S.J.*, a special issue of *Oral Tradition*, vol. 2, no. 1, pp. 54-72.

Lounsbury, Floyd G. (1953). *Oneida verb morphology*. New Haven: Yale University Press

Mohawk, John (1989). "Origins of Iroquois Political Thought," *New voices from the Longhouse*, edited by Joseph Bruchac. Greenfield Center, NY: Greenfield Review Press. pp.218-228.

Mohawk, John (2005). "The warriors who turned to peace." *yes! magazine*. <http://www.yesmagazine.org/issues/healing-resistance/the-warriors-who-turned-to-peace>.

Ong, Walter J. (1982). *Orality and literacy: The technologizing of the word*. London: Methuen.

Paton, J. & Emery, M. (1996). Community planning in the Torres Strait. *The Journal for Quality and Participation*, 19(5): 26.

Pepper, S. C. (1942). *World Hypotheses*, University of California Press, Los Angeles.

Pins, Gwyn (1992). "Oral History." *New Perspectives on Historical Writing*, edited by Peter Burke. University Park: Pennsylvania State University Press.

Pratt, Scott L. (2002). *Native pragmatism: Rethinking the roots of American philosophy*. Bloomington: Indiana University Press.

Purser R. & Cabana, S. (1998) *The self-managing organization: how leading companies are transforming the work of teams for real impact*. Free Press, New York.

Sioui, Georges E. (1992). *For an Amerindian autohistory: An essay on the foundations of social ethic*. Montreal: McGill-Queens University Press.

Sommerhoff, G. (1969). The abstract characteristic of living systems. In F.E. Emery (Ed.), (1981) *Systems Thinking*. Harmondsworth: Penguin.

van der Heijden, Kees. (1996) *Scenarios: The Art of Strategic Conversation*. Wiley & Sons

Tomkins, Silvan S. 1963. *Affect, imagery, consciousness*. Springer.

Wallace, Paul A. W. (1946). *The White Roots of Peace*. Philadelphia: University of Pennsylvania Press.

Weisbord, M. and Janoff, S. (1995). *Future Search: An Action Guide to Finding Common Ground in Organizations and Communities*. San Francisco: Berrett-Koehler.

Widdowson, Frances and Howard, Albert (2013). *Approaches to aboriginal education in Canada: Searching for solutions*. Calgary: Brush Education.