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## A Research Note: An exploration on the intellectual learning process of systems thinking by managers in the digital social media ecosystem

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### Abstract:

*There have been serious efforts by some systems theorists to produce publications on systems thinking specifically for busy practicing managers. At the same time, the practical value for managers to learn systems thinking has long been recognized in the systems literature - to enable them to cope with the complexity very often exhibited in the problems facing them. There have been, however, barriers that hinder this managerial intellectual learning efforts. On top of that, the contemporary Internet environment, including the digital social media ecosystem, creates new learning barriers as well as new opportunities to support managerial intellectual learning. The paper examines some of these learning barriers and opportunities from the perspective of professional development, and offers some suggestions on intellectual learning to practicing managers that is immersed in the digital social media ecosystem. The vital roles of e-mentors, e-coaches, and e-counsellors are stressed in this paper.*

**Key words:** Critical Systems Thinking; digital social media ecosystem; managerial intellectual learning; Multi-perspective, Systems-based Research

### Introduction

In the contemporary social environment that we now find ourselves in, the digital social media ecosystem increasingly makes up a significant habitat for many of us: the social networking applications, notably Facebook, Google +,

blogs, Twitter, Youtube and various virtual communities, etc., are interconnected into a huge (not necessarily global) digital social media ecosystem. It is accessible via PCs, smartphones and PC tablets by people on an anytime and anywhere basis. For consumers, the motives for participating in the digital social media ecosystem have been identified as information seeking, entertainment seeking and social connection building (Heinonen 2011). In general, people carry out playing, publishing, buying, sharing, networking and localization in this digital ecosystem (Cavazza 2012). There has been much discussion, e.g. in professional and academic journals, on how the digital social media ecosystem has affected our lives, including our learning modes.

In this paper, the writer is going to examine how practicing managers are able to develop systems thinking competence via intellectual learning that is immersed in the digital social media ecosystem. Specifically, the writer draws on the literature on systems thinking to: (a) explain why practising managers should study systems thinking as a vital part of their continuous professional development, (b) examine how contemporary systems theorists are working at producing publications on systems thinking to busy practicing managers as their targeted readers, and (c) discuss how the Internet environment, including the digital social media ecosystem, affects the intellectual learning by practicing managers, with special reference to multi-perspective, systems-based (MPSB) research whose objective is to review various management subjects via the critical systems lens (Ho 1995). Finally, some suggestions are made on effective professional development with a pervasive digital social media ecosystem.

### **Learning systems thinking by practicing managers for professional development**

Systems thinking has been studied both as a separate subject or as a topic in various business subjects, e.g. accounting, supply chain management, information systems management and human resource management. In this regard, Vo *et al.* (2006) is illustrative on how systems thinking has been employed in Information Systems education. This writer

studied for a Master of Arts (Management Systems), which specialized in a few strands of systems thinking, at the University of Hull, UK in 1985-86. There are established international as well as national institutions and societies that promote systems thinking and systems research, e.g. the UK Systems Society and the International Federation for Systems Research. Thus, most managers who have studied for business degree programmes or professional examinations in different business disciplines have learned systems thinking. Unlike business subjects in specific functional areas, which are more inclined to adopt single-perspective and functional thinking, systems thinking explicitly endorses a multi-/trans-disciplinary perspective and holistic way of inquiry.

Practicing managers do not normally pursue systems thinking study for their professional and management development: learning systems thinking is often not considered a high priority by practicing managers for enhancing their employability in the labour market, as employers in the business world do not normally specify education in systems thinking as a job requirement in their staff recruitment exercises. [Intellectually, it is, of course, quite feasible to examine the topic of employability from the systems thinking lens and come up with some practical advices on employability based on systems thinking.] The market size of MBA programmes is much larger than that of Master Degrees in Systems Thinking. At the same time, there is no professional body in the systems field as you will find in accounting and finance, human resource management and marketing etc. The website of the United Kingdom Systems Society (<http://www.ukss.org.uk>), just says that: “If you are interested in systems the society needs you and you need the Society”. This statement resonates with Churchman’s (1979a) statement on systems thinking: “There are no experts in the systems approach.” If the systems community does not offer visible and cogent professional bodies’ support to improve managers’ employability, why should practicing managers pursue study in systems thinking? To respond to this query, this writer identifies two reasons based on the systems literature:

**Reason 1:** systems thinking is useful for equipping practicing managers with intellectual wisdom to cope with

problem-situations that are complex. And complex problem-situations are frequently encountered by practicing managers. Thus, Ackoff (1981) talks about systems age thinking in the systems age; Mitroff (1998) discusses smart thinking (which is essentially systems thinking) in crazy times; Flood and Carson (1998)'s book is called "Dealing with Complexity", and Shoderbek *et al.* (1985) states that "Problem solving today [...] necessitates a broad look at a system rather than an overly obsessive scrutiny of the particular problem in question." It is relatively easy to accept the argument that, as our business environment, which has been called the "new normal", e.g. Joachim (2012), is becoming more complex, as compared with the mid-80s, practicing managers should spare more effort to learn systems thinking so as to enable them to cope with the increasingly complex business environment facing them.

**Reason 2:** The analytical methods and the many management fads that are affiliated with the analytic methods do not provide effective means to cope with the complex problems that managers very often have to cope with although they have been much employed by practicing managers. For instance, Schoderbek *et al.* (1985) state that managers' mind is "a finite one [...] In order to exhaust a subject and thus to understand it, the mind must... attend to ideas in sequence." In short, busy managers tend to adopt the analytical method (i.e. the non-systems approach based on Machine Age thinking) to solve complex problems that should be better addressed with systems thinking. As Jackson (2003) states: "Too often, however, managers have been peddled panaceas in the form of the latest management fad... Unfortunately, as so many managers have discovered to the cost of themselves and their organizations, these relatively simple solutions rarely work in the face of significant complexity, change and diversity."

The need to develop managers' holistic problem-solving skill has also been recognized in a recent review of MBA programmes by Datar *et al.* (2011). In the same vein, if we agree with the observations of Fugate *et al.* (2004) that "people more commonly experience largely self-managed, boundaryless careers comprised of many positions with multiple organizations and even industries", then it is not difficult to understand why contemporary systems thinking such as soft

systems thinking (Jackson 2000, Chapter 7) and creative holism (Jackson 2003, Part III) are indeed relevant for the professional development of practicing managers as their work environments can be described as ones with significant complexity. Such complexity, which is mainly soft (i.e. inter-subjective) can be effectively coped with by applying these systems notions and methodologies, based on the findings as reported in the systems literature. Thus, the practical value for practicing managers to learn systems thinking for professional development is clear.

A number of reference books on system thinking, e.g. Jackson (2003) and Flood (1995), are explicitly targeted at practicing managers as their main readers; Jackson (2003) and Flood (1995) have explicitly examined the topic of how to develop systems theories for practicing managers who are busy but need to learn systems theories to effectively cope with the complex challenges facing them in their work settings. Both Jackson (2003) and Flood (1995) are intended to be comprehensible to these managers and relevant to their professional development. In the words of Flood (1995), the popularized works of systems thinking for practising managers need to “cut back on the number of concepts used to explain methods and translates those that are kept into everyday language and then integrates them into one coherent whole system.” These two books mentioned do indeed differ from other systems references, such as Flood (1990) and Churchman (1979b), which are more academic and philosophical, thus difficult for practicing managers to digest.

From the writer’s teaching experience in business degree programmes over the years, many part-time business students, who are busy managers, do not even have a reasonable grasp of all the “defective” management fads, i.e. scenario planning, benchmarking, and value chain analysis, that Jackson (2003) has criticised: these managers are too busy and not sufficiently motivated to learn these fads. As a result, practicing managers have shallow understanding of these “relatively simple solutions”. The main question of the writer is how these busy practising managers are able as well as motivated to learn the popularized systems writings of contemporary systems theorists. On this concern of motivation to learn systems

thinking, the writer notes the observation in Data *et al.* (2011), in the context of reviewing MBA programme, that students' focus has shifted from "learning to earning"; MBA students are becoming less interested in academics; they are more interested in networking and pursuing for much better jobs. This indicates that they are obsessed with their employability. Thus, managerial intellectual learning should better be supported via the digital social media ecosystem in which social networking is actively pursued by managers.

If practicing managers are not motivated to learn academics, including publications in systems thinking, their understanding of systems thinking will be shallow. Subsequently, they will have difficulties to develop problem-solving competence to cope with the complex business environment facing them. In the writer's view, learning the contemporary systems theorists' works is not less easy for these busy practising managers than the other simple solutions that have been identified by Jackson (2003). Systems references, such as Beer (1972), are not easy to read. Indeed, as a dissertation supervisor, the writer is aware that some post-graduate students even have difficulties to read Pava (1983), which is a book on socio-technical systems approach that is relatively easy to comprehend. Some of the writer's students in business studies just learn the management fads by reading relevant notes in the Internet, notably from Wikipedia. Few of them, for example, have read Porter's (1985) original work on Value Chain Model.

How practicing managers are motivated to learn systems thinking is a key concern to be addressed if the contemporary systems writers' goal of developing systems thinking managers is to be achieved. In this respect, a key task for educators in systems thinking is to figure out as well as to communicate to practicing managers how mastery of systems thinking can improve (a) managers' employability, i.e. ability to retain their jobs or find better jobs (Emmerik *et al.* 2012), as well as (b) managerial competence. The next section examines these concerns as related to managerial intellectual learning in the context of the prevailing digital social media era.

## **Learning systems thinking for managers' professional development in a pervasive digital social media ecosystem**

The Internet in general and the digital social media ecosystem in particular have much affected how people, including practicing managers, go about learning knowledge and solving problems. For MacGregor and Semler (2012): “Western professional environments have evolved over the last decade or two to break down barriers between the professional and the personal, the public and the private..” When encountering problems in their workplace, many managers would post their questions in the corporate intranets; they can also learn information and advices via their corporate learning portals which make up a means for corporate management development (Dessler 2004, Chapter 5). Increasingly, more managers will also post their questions in Internet discussion forums or in their personal Facebook wall; they can use the Internet search engines, such as Google, to search for information in the Internet. Useful information so found can be downloaded and stored in their computers (or in the Cloud computing platform); at the same time, relevant Internet links are saved for future references. Many people have been doing that on a real-time basis, via their desktop computer, smartphones and PC tablets; many are comfortable to do all these in a multi-tasking mode.

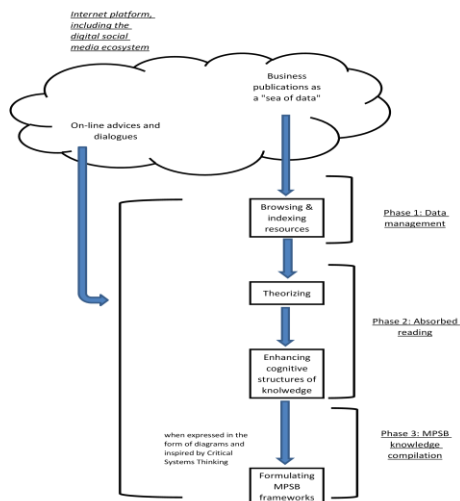
The Internet and the digital social media ecosystem are indeed very useful to support managers in coping with job challenges. There are, nevertheless, some very negative impacts of all these Internet-based facilities on the professional development of managers: all these real-time multi-tasking as well as the practices of saving electronic resources and their url addresses reduce managers' reliance on using their own memory, especially long-term memory to store knowledge; real-time multi-tasking and poor long-term memory of intellectual knowledge reduce managers' ability to develop deep-level and independent thinking that requires absorbed attention of problems and skilful application of intellectual knowledge stored in human memory, not somewhere in Internet Cloud Computing infrastructure (Paul 2012). Granted that this

barrier of intellectual learning originating from the Internet is acknowledged, managers should figure out how their professional development can be effectively pursued in the digital social media ecosystem. Managers need to spare time offline, i.e. to disconnect from the Internet, to do absorbed reading of books. By doing so, they gain knowledge that is stored in the long-term memory of their mind. Such reading effort, essentially in contemplation mode, enhances their cognitive structure of management knowledge that makes them more skilful in comprehending and tackling problems, especially on complex problems.

## Main phases of managerial intellectual learning in the Internet era

To explain how to enhance the intellectual learning process by managers, the writer construct an intellectual learning process model with special reference to multi-perspective, systems-based (MPSB) knowledge compilation so as to present a more organized review of such learning process, see Figure 1.

Figure 1: Managers' intellectual learning and MPSB knowledge compilation in the Internet era





Referring to Figure 1, managerial intellectual learning is about learning concepts, theories, and methodologies to enhance the cognitive skill of managers for their professional development. In this case, the contemporary business publications are perceived as a "sea of data". Our Internet infrastructure, including search engines, portals, e-libraries and, above all, the digital social media ecosystem, provides a powerful means for practicing managers to browse through and index e-resources, e.g. by classifying and storing the url addresses of the e-resources in personal notes for retrieval later. Such browsing and indexing effort is itself a form of intellectual learning. This is labelled as Phase 1: Data Management in Figure 1. Browsing and indexing effort is increasingly done and relied on by managers to build up their own external e-resource repository. The consequence, as Paul (2012) reminds us, is that managers do not feel the need to memorize the information found, which subsequently weakens critical and intellectual thinking ability.

Next, Phase 2 of intellectual learning, namely, absorbed reading, is considered. This 2<sup>nd</sup> phase involves formulation and refinement of theories/ theoretical frameworks in the managers' mind. This effort is called "theorizing" in Figure 1. Diagrams are often constructed to make explicit the theoretical frameworks formulated via absorbed reading. Managers are mainly absorbed in a critical mode of contemplation of the theories and concepts under review, and this is mainly done without access to the Internet. It is in Phase 2 that the popularized books on systems thinking are useful, as it is via reading of these books on systems thinking that practicing managers improve their intellectual knowledge in systems thinking. Increasingly, reading is done with an e-book reader, such as Amazon Kindle, which is capable of storing lots of books and journal articles. From that reading effort, deepened understanding of theories and concepts are gained which are primarily memorized in the managers' mind. Regrettably, as pointed out by Paul (2012), managers are having difficulties to conduct this 2<sup>nd</sup> phase activity of intellectual learning due to the influence of the Internet.

When these knowledge compilation activities on notions and theories from management disciplines are done via the

lens of ***critical systems thinking***, the intellectual learning process can be considered as a multi-perspective, systems-based (***MPSB***) ***knowledge compilation*** process and the resulting theoretical frameworks are ***MPSB frameworks*** (Ho 1995). This is identified as Phase 3 in Figure 3. Phase 3 learning further develops managers to become critical systems thinking managers.

If the advice as reported in Paul (2012) is heeded, more efforts should be exerted on Phase 2 of the managerial intellectual learning process so as to develop critical and independent thinking competence. To build up critical systems thinking competence, managers should also make Phase 3-type of learning effort. Subsequently, effective, holistic, at times, collaborative managerial learning needs to be fostered via intellectual, social and emotional integration (Love and Love 1995) via the digital social media ecosystem. Figure 1 solely deals with the intellectual aspect of managerial learning on systems thinking. The writer maintains that an integrated learning process by managers in the social media environment can be supported by e-coaches, e-mentors and e-counsellor. These coaching, mentoring and counselling roles can be adopted by consultants, trainers and teachers experienced in coaching, mentoring and counselling as well as knowledgeable in systems thinking. Admittedly, coaches, mentors and counsellor do not confine their support on managerial learning; they also offer social networking to managers that are valuable to the career development of managers. Their support, in total, improve the employability of managers.

The managers' intellectual learning process model as depicted in Figure 1 is not a vigorously formulated and comprehensive theoretical framework. [It is indeed useful to examine and, subsequently, revise the managerial intellectual learning process model as proposed in this paper with theories from the learning and development literature.] The aim of this paper is to discern three phases of intellectual learning efforts in a rough sketch mode; this learning process model points out that practising managers need to spare efforts on all the three phases of intellectual learning to improve its learning effectiveness. Managers will find the popularized systems thinking publications very useful for learning systems thinking.

At the same time, systems thinking theorist, consultants and educators need to develop e-coaching, e-mentoring and e-counselling skills to support practising managers' learning in the digital social media ecosystem. In this regard, Ho (2013) offers an account of an attempt to do so. These coaches, mentors and e-counsellors can be employed by the individual managers, by the managers' employers or they may perform these roles in an informal way.

Two issues are further noted at this stage of the discussion:

**Issue 1:** there should be more investigation on how e-coaching, e-mentoring and e-counselling can be practised in this digital social media environment, e.g. as profit-making services or as social activities, and by whom, e.g. universities, consultants or individual educators. Contemporary coaching and mentoring literature has lots of insights on how coaching and mentoring can improve managers' work performance and promote managers' career success. Systems thinking has also been applied in the coaching, mentoring and counselling fields as reported in the literature in these fields. Future research effort is, in this case, to figure out how systems thinking-inspired e-coaching and e-mentoring can make further contribution to these goals of improved work and career performance.

**Issue 2:** there is a need to examine how the digital social media environment can contribute directly and indirectly to the physiological and psychological elements in management development so as to achieve "sustainable executive performance" as described in MacGregor and Semler (2012). This broader issue is not examined in this paper at all.

Finally, it is clear that the digital social media environment, e.g. LinkIn.com, is valuable to managers for their career development and employability; the digital social media environment is not just valuable for the support of managerial intellectual learning process.

## Concluding remarks

Some practising managers have been exposed to systems thinking during their tertiary educations at Universities. Some

of these practicing managers will be so interested in systems thinking that they spare time to study popularised systems references and, as result, build up systems thinking competence – they become systems thinking managers who are more capable to solve problems competently in an increasing complex, diverse and dynamic business environment.

Many of the practising managers will find e-mentoring, e-coaching and e-counselling support useful for them to develop systems thinking competence. They should be at ease to read academic articles from time to time for their intellectual learning. In this case, it is useful for them to have access to academic e-libraries after their graduation from their universities. Such access of e-libraries can normally be provided to university graduates though an annual fee is normally charged. At the same time, the academic and education communities need to continue with their efforts to produce publications that practicing managers are able to comprehend and feel relevant to help them to cope with their problems in their managerial works. At present, there is still a deep concern in the business education sector on how to bridge the “gap between theory and practice” as noted in Datar *et al.* (2011).

By taking advantages of the characteristics of the digital social media ecosystem, e.g. collaborative, accessible, and person-centred, practicing managers are better able to adapt their learning effort with an explicit goal to develop systems thinking competence, notably critical systems competence, to cope with the complexity in the business world and improve their employability at the same time.

In this paper, the writer is not able to introduce readers to the literature of Critical Systems Thinking and Multi-perspective, Systems-based (MPSB) Research; some references, e.g. Jackson (2000; 2003) and Ho (1995; 2013) on these two topics are provided in the *References* of this paper.

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