

Dear Richard,

After having read with great interest your articles I am providing some comments. As you will see (when you receive the thesis) there are many points of common concern. I found your articles very stimulating and will try to indicate some points of agreement and ‘tensions of difference’.

### **The Canada article.**

You write: “...the fact that the performance of farming enterprises is so dependent on the characteristics of individual farmers, adds substance to the notion that the dynamics of the combinations of components - within different farming systems - allows unique properties to emerge”.

One can find in every village in Eastern and Southern Africa some farmers who do much better than other farmers, year after year, under similar external (constraining and enabling) conditions. The performance of farming enterprises is indeed dependent on the characteristics of individual farmers. Apparently some farmers are able to use the ‘room for manoeuvre’ while others cannot (see p. 34 in my book). It had never occurred to me before that this ability to create space for manoeuvre and to be a ‘better’ farmer can be considered an emergent property of a farming system! The fact of life that there are always a few farmers who perform better under similar external conditions shows indeed that systemicity and emergent properties do exist. On page 40 of my book I say: “Immediately the question crops up why different actors create different spaces for manoeuvre; why does one actor evaluate, interpret or internalize an ‘external’ factor as a constraint, while another actor evaluates the same ‘external’ factor as an opportunity, as room to manoeuvre”. To my mind the evaluation of external factors takes place at the level of the discursive and practical consciousness (the arrows number 1 and 2 in the upper route of my Diagram 5 at page 31). I believe, however, that also the lower route in Diagram 5, the route of internal norms and values or basic attitudes, plays a role. From your articles I understand that also you emphasise the role of norms and values in the development of sustainable farming systems.

You emphasise the existence of ‘tensions of difference’ both ‘horizontally’ and ‘vertically’ between systems.

Section 11.1 (p.220) of my book is titled ‘Pairs of opposites’ and is partly based on the work of Schumacher (whose 1977 book ‘A guide for the perplexed’ deserves, I feel, more attention of development practitioners). Schumacher speaks of ‘divergent problems’ and argues that pairs of opposites are irreconcilable in ordinary logic, they demonstrate that ‘life is bigger than logic’. Divergent problems must be ‘lived’ at a higher level of awareness where a true synthesis of opposites becomes possible. In Table 13 of my book (p.223) I have tried to demonstrate that life is a succession of divergent problems. Pairs of *apparent* opposites are in the final analysis a Janus-faced reality, a unity-in-diversity. Spiritual experience reveals the non-duality of pairs of opposites. The dynamic tension of irresolvable paradoxes (apparent opposites) can be resolved in the process of spirituality. Spirituality as the process to learn the ‘art of ‘living’ - to learn to deal with opposing polarities, with ‘tensions of difference’ that constitute the fabric of life - seems indispensable in the quest for sustainable farming systems.

The dynamic co-existence of Koestler’s self-assertive and integrative tendencies seems especially relevant to agricultural systems research. When both tendencies are simultaneously realized the ‘magic’ of holistic performance of farming systems ‘emerges’ (p.220). At a personal level ‘tensions of difference’ occur in our marriage (my wife is Tanzanian and I am Dutch, so we differ in ethnic and religious backgrounds). Nevertheless, unity-in-diversity is, in most cases, possible.

You remark that the FSR & D & E approach is relatively expensive and often difficult to conduct in practice.

The latter is absolutely true, that’s the starting point of my thesis. With regard to the first part of your remark, we have to consider that the operating costs of FSR might be higher than of

conventional on-station research. But when the investment costs are included, the story might be different. Moreover, the opportunity costs of not implementing on-farm research (and only continuing with largely irrelevant on-station research) are huge (at least in this part of Africa).

You say: The soft systems methodology, critical systems thinking and emancipatory systems thinking are based on systemic debates, systemic conservations and critical reflections.

My point is that *debates*, *conservations* and *critical reflections* all take place at the level of the rational-empirical consciousness. You have argued for three ‘levels’ of inquiry in FSR: hard, soft and critical systems thinking. In my view the attunement of hard, soft and critical systems *thinking* is not hindered so much by the difference between hard, soft and critical as by the common element, i.e., the reliance on *thinking-being* as the only possible mode of being. In Chambers 1997 book (Whose reality counts) Singh argues that we have to move from ‘doing’ and ‘talking’ to ‘being’ (p.214). A direct personal experience of ‘just being’ - to be gained through the process of spirituality - might facilitate the attunement of the different systems approaches. Spirituality facilitates, what Marcia Salner named, the development of ‘a particular stage of epistemic development’. A sufficient ‘level’ of epistemic development, necessary to develop adequate systemic capabilities, is to my mind facilitated by regular access to the most basic state of consciousness or being, i.e., transcendental consciousness (pure consciousness or just being). The personal experience of various stages of consciousness makes it possible to directly experience and intellectually understand that different ontological and epistemological positions can be taken, which in turn facilitates systemic learning.

You speak of ‘tensions of difference’ between the processes of action and reflection, between theory and practice, between experience and insight, and between facts and values.

This reminds me of Diagram 1 on page 4 of the book. This diagram is adapted from Bos who strongly leans on Goethe. It is a model characterized by polarity and rhythm. The cognition- and choice-processes are searching processes, heuristic and iterative in nature, they are heuristic processes of rhythm enacted between poles. Insight in -and receptivity for- the principle of polarity and rhythm is important. Rhythm -a movement between two poles- is a very delicate, never exactly predictable, continuously adapting play between poles. Development requires both poles. Rhythm brings the poles in a state of dynamic balance. The one pole does not deny or destroy the other one, but both poles are in dialogue. The characteristic of rhythm is not the permanently ‘being in balance’, but the play between poles (p.5). This seems to fit in well with your emphasis on the importance of tensions of difference. The emergence of sustainable farming systems demands reductionistic research processes as well as holistic design processes.

You refer to ‘fully integrated, systemic beings’, a quest for ‘goodness’, moral consciousness as an emergent phenomenon, and ‘goodness’ as an emergent property of the inquiry system that is our agricultural science.

I think that we agree that to become fully integrated, systemic beings our spiritual component can no longer be denied nor neglected. ‘Goodness’ as an emergent property of agricultural science demands in my view more attention for the lower route in my Diagram 5. In addition to the conventional emphasis on the mechanisms of the upper route, I think that social and natural scientists alike need to stress the lower route as an indispensable element in the quest for goodness. I believe that ‘life-supporting’ internal norms and values spontaneously ‘emerge’ at the interface of the practical and transcendental consciousness. Scientific research on the individual and social effects of the Transcendental Meditation™ technique supports such a ‘belief’ (see my thesis for numerous references). This scientific evidence indicates that ‘goodness’ is indeed an emergent property of integrated human beings and integrated ‘human activity systems’. ‘Goodness’ in human activity systems is facilitated by the holistic field effect of a coherent and ‘high quality’ collective consciousness (see section 9.4 in the book).

## The Georgia article

You refer to the aphorism “if we always see how we’ve always seen, we’ll always be who we’ve always been”.

I rather would say: ‘if we always *be* who we have always *been*, we will always see (and act) how we have always seen (and acted)’. In my view ‘being’ is the most fundamental property. From the perspective of the constructivist paradigm our way of ‘seeing’ and ‘thinking’ influences our way of ‘acting’. From the perspective of the transcendentalist paradigm our mode of ‘being’ influences our way of seeing, thinking and acting. I do not deny the usefulness of constructivist-oriented approaches, but I think that these approaches are greatly facilitated by techniques to change our mode of being.

You speak of the possibility of emergence following a chaotic reorganisation to a higher order of complexity.

In the transcendentalist paradigm one would say that social systems (human activity systems) ‘suddenly’ can move towards a higher order of functioning when the coherence and ‘quality’ of the collective consciousness of social systems surpass a certain threshold level. An example is the rather abrupt fall of the Berlin wall.

In the inspirational learning process you refer to meditation as ‘disengagement’: the activity in which the learner moves from abstract conceptualisation to reflective contemplation (contemplation which results in spiritual insights).

You say then that the learner disengages from the conceptual world “in order to allow the mind to free itself from thoughts”. This is indeed the essence of meditation processes although many meditation techniques do not seem to be very effective in this respect since they are essentially concentration techniques. Concentration on ‘what-so-ever’ does not facilitate the process of transcending all thoughts because concentration always involves mental activity, always involves thinking about something (even if it is thinking about freedom from thoughts). When concentration techniques ‘work’ it seems to be because of the sheer exhaustion of the mind to concentrate on something. The mind gets so tired of concentrating that it ‘lets go’ of everything, even thoughts. This process of transcending all thoughts is essential to reach the stage of transcendental or pure consciousness, ‘just being’ without any *contents* of consciousness. The meditation technique which I practise for 27 years now, TM, seems relatively effective and efficient in transcending (and easy to learn and practise because no concentration is involved). The TM technique has been subjected to (positivist) scientific scrutiny for three decades now and the research results have been published in peer reviewed scientific journals (without this published research work I would not have had the guts to write my thesis).

I am afraid that insights that are ‘created through a process of introspective contemplation’ might still be ‘distorted’ by somebody’s individual constitution since reflective contemplation remains an intellectual exercise. In my view ‘true’ spiritual insights are not ‘created’ but rather ‘revealed’. They ‘emerge’ spontaneously at the borderline of the transcendental and practical consciousness. They are emergent properties. This does not imply that such ‘emerging’ insights shouldn’t be subjected to the critical intellect afterwards, but the process of ‘emergence’ is not a rational activity.

If ‘goodness’ is an emergent property of integrated human beings (as indicated earlier on), then ‘true’ spiritual insights would be intrinsically ‘life-supporting’. Since in our times, however, few individuals have realized ‘enlightenment’, we better keep on using both routes in Diagram 5.

In your ‘integrated critical learning system’ you distinguish (but not separate) the *experiential* learning subsystem (linked to cognitive worldviews) and the *inspirational* learning subsystem (linked to normative worldviews).

I am sure that you know how difficult and confusing terminology can be in discussions that involve spiritual matters. We can speak of an *inspirational* learning subsystem, but have to realize that this learning subsystem is grounded in the *experience* of transcendental consciousness and is thus also an *experiential* process.

In the ‘integrated critical learning system’ also power and emotions play a role. ‘Power’ is a difficult concept which Latour, to my mind, has elucidated by arguing that power is a consequence rather than a cause of collective action (p.189-190 of the book). It seems to me that we must move out of the sphere of ‘power’ and start looking for the cause of collective action, i.e., the collective consciousness. Critical systems *thinking* (focusing on analyses of power configurations) and soft systems *thinking* (focusing on collective agency) are enacted at the level of the discursive consciousness, the emphasis remains on the upper route in Diagram 5. The concept ‘collective consciousness’ elucidates the troublesome concept of power and a ‘high quality’ collective consciousness facilitates the emergence of Habermas’ ‘ideal speech situations’. More emphasis on the lower route in Diagram 5 might as well facilitate the emergence of ‘emotional intelligence’ and more appropriate norms and values.

### **The chapter five article.**

You distinguish between deontological ethics and consequentialist ethics.

Consequentialist ethics would be part of the upper route in Diagram 5 (compliance and identification with external agents and/or ideas) while the ‘innate’ duties of deontological ethics would refer to the lower route (based on self-evaluation).

You say: “If all the parts of a system were the same, it would not be a system – it would be blob or, if people, a mob!”

Koestler has said interesting things on the difference between identification and integration, or regression and progression (see endnote 13 of chapter 8).

You remark: “And this highlights a particular conundrum: The concept of a learning system will only make sense to those who can appreciate systemic logic having reached that stage of epistemic development that reflects an epistemological position of contextual relativism, yet it is through involvement in such systems that individuals best learn how to reach such a position!”

This seems a vicious circle. In a 1995 article you argued that the fundamental paradox in FSR is that FSR practitioners need to be able “to think in systemic ways in order to appreciate the advantages of thinking in systemic ways!”. In a similar vein, Hamilton argues that synergy must be experienced before one really grasps its positive-sum effect. In his view pursuit of constructivist-inspired Participatory Learning and Action Research (PLAR) techniques requires changes within individuals and organizations, but these changes can only materialize through application of these techniques (Hamilton 1995). Internalization of this approach requires actual engagement in PLAR techniques. But, *how* do actors gain the *initial motivation* to engage themselves in PLAR techniques? According to Chambers et al. (1989) the most effective way to change attitudes is to start by changing behavior through the adoption of farmer-first methods. This refers to the feedback loop represented by arrow number 5 in Diagram 5. To my mind, however, this feedback process is an unlikely route, it amounts to putting the cart before the horse. In the perspective as presented in Diagram 5 beliefs and attitudes underlie behavior, and although mutual interaction may occur, the primacy lays with beliefs and attitudes.

‘The pull of the normal’ is strong: positivist-oriented thinking is deeply engrained in many of us and the continual identification with the rational-empirical consciousness makes that we do not even realize it. If conventional professionalism in the TOT paradigm is to change, a ‘psychological flip’ is required (Rhoades 1994). Says Chambers (1997:233): “The bottom line is to be nice to people. This is close to ‘love thy neighbor as thyself’ ...[and he adds in an endnote]...I am embarrassed to be writing this moralizing stuff... But it would be wrong for this embarrassment to stop these things being said. For they matter”. Instead of only relying on the feedback loop, or to ‘frontally challenge belief systems’, a third alternative is to pay more attention to the lower route in Diagram 5. The first two alternatives depend on the discursive and practical consciousness, while the third alternative is enacted at the interface of the practical and transcendental consciousness. At this level of consciousness ‘psychological flips’ might occur which result in ‘basic attitudes’ that facilitate the adoption of participatory and systemic approaches (see my pages 213 & 214).

You write: "Systemic unity, in this context of creative (= critical) tensions of difference, depends on diversity, but only comes with maturity!"

A mature individual can appreciate and accommodate different worldviews simultaneously. The appreciation of conflicting worldviews can be a pure intellectual process, but true accommodation demands in my view access to 'higher' levels of consciousness. Different levels of consciousness result into different worldviews. Knowledge is structured in consciousness, Maharishi Mahesh Yogi would say. *Being* systemic, *being* mature depends, first of all, on our state of *being*.

### **The Fred Emery oration**

You say: "a primary focus ... is the matter of endowing learning systems with the capability of *thinking about* thinking about systems perspectives, and how they might be developed" (my italics).

See my earlier remarks on the continual identification with the rational-empirical consciousness, on the single reliance on *thinking-being*.

You remark: "This holonic approach to development privileges the view that the systemicity lies not 'out there' as real world systems interacting with equally real world suprasystems (the Emery perspective), but within the process of inquiry into matters 'out there' to which it can attribute appropriate properties - and concerns".

I think that systemicity lies within the process of inquiry into matters 'out there' as well as into matters 'in here'. The process of inquiry into matters 'in here' can be labelled spirituality and meditation techniques can facilitate this process. In my view the field of transcendental consciousness is a field of systemicity *par excellence*. Research findings on the TM technique strongly suggest that the field effect of consciousness is *holistic* in nature since various indicators of the quality of life are simultaneously affected. Research on the field effect of consciousness suggests that a 'high quality' collective consciousness results in a *harmonic* atmosphere, which in turn facilitates social learning, the development of high quality collective agency and the emergence of synergy. Effective meditation contributes to a 'higher quality' collective consciousness, which through its field effect translates into facilitation of societally friendly behavior with others. Changing oneself automatically changes the world (see section 9.4 in the book).

You say: "CLSs are encouraged to explore the 'systemic nature' of the environmental 'force field'... ... This 'analysis' will include an identification of both the bio-physical and socio-cultural 'fields' that are perceived to comprise the suprasystem..."

In my view the field of collective consciousness is a kind of underlying suprasystem in which all bio-physical and socio-cultural 'fields' are embedded. The structures in my Diagram 5 represent socio-cultural 'fields' and are reflections of this field of collective consciousness. This would imply that CLSs first of all must explore the 'systemic nature' of the field of collective consciousness. Or in other words, CLSs must 'walk their talk' and actually engage in techniques for consciousness development.

### **The extension article.**

You say: "[We need] the capability of paradigmatic pluralism – the ability to hold on to different paradigms at one and the same time, and to use each under circumstances appropriate to its particular characteristics!"

In chapter 6 of my book I have characterized 3 different paradigms, the positivist, constructivist and transcendentalist paradigm (Table 8, p.124). There is no simple positivist 'techno-fix' nor a constructivist-oriented 'participation-fix' in resource-poor farming. Similarly, there is also no transcendentalist 'consciousness-mediated fix'. Consciousness development is not an overnight solution: it takes time and the two other paradigms remain indispensable in the search for sustainable farming systems. In Box 21 on p.197 I give an example of the complementarity of the 3 paradigms.

You state: "This essence of 'wholeness through inter-connectedness' is the essence of the so-called (and still much maligned) systems approaches to agriculture. The essential part of the message here, is the emphasis on the word imagine. Farming systems are not 'real' but mental constructions which reflect of particular ways of thinking – they are abstract views of the world not concrete components of it! The significance of this remark lies in the observation that if they are 'imagined entities' somebody is responsible for the imagining!"

Absolutely true! John Lennon said that peace and war are 'imagined'. 'Wholeness through inter-connectedness'. In my view it is the field of collective consciousness that connects us all. Each one of us contributes willingly or unwillingly to this field, each one of us affects the quality of this underlying field. Each one of us is therefore responsible and can play a role. Sustainability is an integrative, holistic property which encompasses 'wholeness in human beings' and 'wholeness in society'. In the perspective of the transcendentalist paradigm the 'art of fostering synergy' is facilitated by a 'high quality' individual and collective consciousness. In addition to the outward-oriented approaches of the positivist and constructivist paradigms, I recommend an inward-oriented approach which focuses on consciousness development (p.198).

### **The confarm article.**

You write: "...I have long been convinced that the power to change patterns of cultural beliefs about agriculture and how it should be practiced, lies essentially with people and not policies".

We share this conviction. The state of our agriculture is indeed a reflection of our state of mind. Your 'reluctant conclusion' in this article refers to the need to develop a particular 'state of mind' that integrates the existential with the elemental. In my view each citizen, not only farmers and agricultural researchers and extensionists, can contribute to a 'high quality' collective consciousness (a 'high quality' collective state of mind) and thus sustainable farming systems.

You quote Paul Thompson who writes: "to seek sustainability....is to follow one's bliss".

I do not know (yet) the work of Paul Thompson, so I am not really sure what he means with this statement. Maharishi Mahesh Yogi certainly would agree with him since in his view the field of transcendental consciousness is a field of pure bliss! Although I without fail enjoy meditating, I am still waiting for the pure bliss to come!

Thanks a lot for your interesting articles.

Best regards,

Toon