Review of 'Emery, Fred: The Ideal Seeker' by Mark E. Hillon. 1

(NB. Quotes from Hillon are in font size 10).

Merrelyn Emery July 2024

This is the Handbook editors' second go at an article on the work of Fred Emery as one of their organizational thinkers. I wrote the first one a few years ago but that was rejected. So too was the article by Don deGuerre and Philip Deering discussing my work.

None of us received any formal reason for the rejections but one of the editors told me that my paper read like a series of accomplishments rather than a story to which I replied that yes, the list of accomplishments was the story of Fred's life.

So there were too many accomplishments and not enough story. Now they have gone from the sublime to the ridiculous with too much story and no accomplishments. Fred Emery was certainly an ideal seeker in the sense that he never deviated from trying to improve the human condition but after reading this account, I could not find any reason for why he should be judged "Australia's greatest social scientist" (p578) or why he was awarded a Doctorate of Science Honoris Causa (DSC) which is extremely rare in Australia, especially in social science. What did he actually do that was so worthy? This paper does not tell us.

Hillon's article is so discursive, so obtuse that none of Fred's many actual accomplishments sees the light of day. We will discuss each of these as it is mentioned in the text, usually in such a fragmented and incomplete form to appear as nothing much, rather than what they actually were, startling new insights or discoveries with huge implications for either the theory or practice of social science in some form, or both. Of course, the latter is the reason he was so worthy of the honours.

The 'story'

Hillon in his introduction to Fred's work homes in on "His choice of futures at a young age...enterprise as his focus"... "gave his life clarity" (p578). Fred actually wanted to join the Navy but they wouldn't have him because he was colour blind. Then he tried the Army but they wouldn't have him either because his teeth weren't good enough. In addition his earliest recorded writing in 1946 for his BSc (Hons) was 'A psychological study of the prejudice of white school children towards natives'. It showed he had a strong sense of fairness and social justice. Hillon recognizes this on p579 and tries to link it to his emphasis on enterprise but the fact remains that it was social justice wherever it popped up, not necessarily at work. There was almost no mention of work or enterprises in his work until the late1950s. Even then at Tavistock, much of his research concerned marketing research and alcohol studies amongst a diversity of other subjects.

Hillon also sees Fred's life as a narrative, or rather he tries to force it into shape as a linear narrative: one based around the theory of the ideals but it was nothing of the sort. Much of Fred's work throughout his life did not touch on work or the ideals at all but ranged far and wide wherever interest or an opportunity took him. There is a big difference between being an ideal seeker and researching the set of human ideals, Hillon confuses them.

It is absolutely true that he was determined to follow, and create, the steady stream of research results to reach the holy grail of finally knowing precisely how to design organizations suitable for people as purposeful systems. However, he achieved this relatively

¹ Szabla (ed.), (2021) The Palgrave Handbook of Organizational Change Thinkers, pp577-593. https://doi.org/10.1007/978-3-030-38324-4_8

quickly through the discovery of the design principles in 1967 and then the design of the Participative Design Workshop in 1971. There was really only mopping up after that.

Fred was an intensely curious man and would not hesitate to follow up an interesting lead regardless of whether it fitted with his current workload. Certainly at Tavistock where the staff worked for their own salaries via projects, and later at the Centre for Continuing Education at the Australian National University where we had award salaries but accepted research projects as they came in from the outside, many of the discoveries and accomplishments arrived as we worked though the opportunities they offered. They were not part of any deliberate sequential plan.

These covered areas such as human communication, telecommunications, media, perception, personality and the future to name just a few. Fred was a genuine poly math making original and highly creative contributions in several fields from statistics to psychopathology and the maladaptions. Another major interest throughout his life was democracy in all its forms. Hillon mentions almost none of these.

Hillon mentions the diversity of his work in his PhD, drawing "from all disciplines" (p580) but neglects to mention the diversity of the areas of his work in general. To do so would obviously make nonsense of Hillon's thesis of Fred's singular path to reducing alienation and injustice in enterprise. They would destroy the clarity of the "narrative" he is seeking to establish which does grave damage to reality in the process. As such, the article ends up being a 'narrative' but it is primarily a fairy story, lacking all the anchors in Fred's work that would have bound it to reality.

Similarly, Hillon gets many details wrong. In the section on influences and motivations, he mentions the "thin red threads" (p578) Fred followed. "Those thin red threads are the very few modern scientists who observed social phenomena, collected data, theorized, and then went back to the field to test and refine or refute those theories until an applied theory emerged that would stand up to repeated use in actual enterprises and organizations" (p578-9) That explanation is incorrect. Fred usually referred to it as the *Thin Red Line* (TRL), the line tracing the development of a science based on material rather than abstract universals (Emery M, 2000). It includes the line of thinkers who understood the world consisted of open systems, not the closed system versions so ubiquitous in social science. Those on the TRL were not all social scientists but included philosophers, physicists and 'split brain' researchers. Depending on his focus at the time Fred included Christopher Caudwell, Hegel, Marx, Cassirer, Chein, Heider, Gibson, Feibleman and Faraday, the pioneers who used an open systems framework to tease out new knowledge.

The open system.

Fred's first major conceptual leap was undoubtedly the conceptualization of the open system documenting its changes over human history. Hillon approaches the subject of open systems at the top of p582 in in a long winded paragraph discussing Fred's (1993) appraisal of Trist's contribution to sociotechnical systems. Trist rejected attitude and substituting social relations as the measurable concept. This was fitting in a tribute to Eric Trist but doesn't explain the move into socioecological with the concept of the open system. Incidentally the quote of "mutual determination of subject and object..." is from p1174, not p1173.

We are then treated to a mention of Angyal's (1941) model of symmetry in adaptive relations followed by a critical sentence: "The socio-ecological perspective started to emerge when we realized that a system could not be characterized without a characterization of its environment" (Emery F, 1993, p1175), but you won't find it in Hillon. Why not?

This would have been the logical place to inform the reader of the famous Emery & Trist (1965) paper, presented first by Fred to a meeting of the European Informal Group in 1963, on 'The causal texture of organizational environments', one of the most cited social science

papers of all times. Emery & Trist put the open system into a form where it became readily amenable to all forms of planning and research. That paper is only briefly mentioned pages later under an almost irrelevant heading. It is also not in the bibliography. Why is this most famous contribution skated over?

Nowhere in the entire paper does Hillon tell the reader what Emery did in relation to the concept of the open system and what it meant.

So here is a brief summary of what he omitted:

A. Open System

B. Directive Correlation

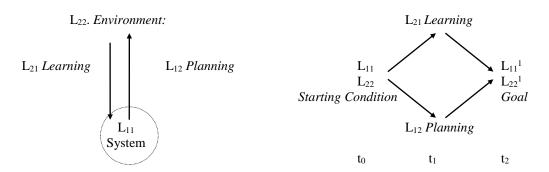


Figure 1. The Basic Models of Open System and Directive Correlation

The basic open system (Figure 1A) expresses the view that system, environment and their interrelations are governed by laws (L). A system (1) acts upon the environment (2), the planning function (L_{12}). Environment acts upon the system and is known to us through learning (L_{21}). L_{11} and L_{22} express the intrinsic nature of the system and environment respectively. (The laws that govern them are implicitly learnt in the Search Conference.)

Figure 1B shows the original condition at t₀, which consists of the system and its environment, where both system and environment are making changes at t₁. These result in a new set of conditions consisting of a changed system and a changed environment at t₂. In this case, the changes are directively correlated and, therefore, adaptive.

The necessary conditions for adaptation are:

- two variables exist at the same time,
- each with a set of values,
- which reach exact correspondence at the time when a certain event happens or a goal is reached.

When these conditions are satisfied, then those functions of environment and system are *directively correlated* in respect of the goal and the starting conditions (Sommerhoff, 1969). They are acting to bring about the same state of affairs from the same starting point.

There are of course, an infinite number of cases in which system and environment are not directively correlated and, therefore, stand in a maladaptive relationship.

In Figure 1, the two models show how system and environment act jointly to produce a new one. The critical differences between the two models are that:

• the open system is a picture of a point *in time* with change expressed through learning and planning, while the directive correlation is a picture *over time*;

• the open system includes adaptive and maladaptive relations, while the directive correlation expresses precisely when adaptation is or is not occurring

Exposition of the social field completed the set showing open and closed systems are asymmetrical, open being the whole of which closed is a part. It also became increasingly obvious that it was a major piece in the puzzle of how we change our minds and create novelty (Emery M, 2012).

The identification of the current environmental texture as one characterized by relevant uncertainty added a further dimension to enhancing the probability of successful new research and practical projects. It was a concept that is highly pragmatic.

You can see from this introduction to the open system that this construct opened the way for social scientists to start planning and implementing projects more likely to prove constructive and adaptive rather than maladaptive. It eventually became the basis of a whole comprehensive conceptual framework called open systems theory (OST), a science based in reality, material rather than abstract universals, the TRL as above.

The genotypical design principles

So having missed that opportunity to inform the reader of one example of Fred's great creativity with massive implications for the development of open systems, Hillon proceeds to dive back into work systems with a long irrelevant discussion of the Human Relations School and the Tavistock pathological model of problem solving and alienation. Please note:

- firstly, rather than using this model, Fred rejected it as he similarly refused to be psychoanalyzed which at that time was a condition for employment, and
- secondly, this whole long discussion does not include one quote from Fred on alienation yet Hillon continues to make it a central theme.

The section on homonomy vs alienation is a similarly confused and sometimes inaccurate roam through change, the Norwegian Industrial Democracy Program and the psychological requirements for productive work. Typical is this sentence: "Cooperation at work is fragile, very easily corrupted by drives toward individual autonomy and personal greed all throughout the organization" (p583). Anybody who has read the Emery sources and understands the power of the design principles knows that cooperation is primarily one of the effects of the second design principle. In organizational structures governed by the second principle, cooperation is not at all fragile. In organizational structures governed by the first principle, you are much more likely to get competition than cooperation.

Then out of the blue, Hillon uses the term *redundancy of parts* in relation with training and replacement costs but without any explanation of what it is, its importance and relevance. He calls it an approach rather than a concept or a construct and then ignores it. *Redundancy of function* doesn't get a mention until 4 pages later in an entirely different section and while it is accurately called a design principle, again we are not given any clue as to its importance or implications.

Nowhere in the article does Hillon explain the original, and simple exposition of the genotypical design principles (Emery F, 1967), their ramifications and the new method for organizational redesign required to accommodate their discovery. It is all written up in *Participative design: work and community life*, first published in 1974 (Emery & Emery, 1974) so not exactly new in 2021. It describes the Participative Design Workshop (PDW) using the principles which was the revolutionary new method Fred designed to replace the old, costly expert driven method used until the end of the Norwegian work. Neither Fred nor Einar Thorsrud ever used that old method again. It was obsolete.

Hillon mentions my work in modifying the PDW for design but *never once does he refer to*

- the design principles as a set or
- the PDW as it has been used for changing the design principle and redesigning structures, quickly, efficiently and sustainably since 1971.

Once again, here are the crucial missing parts, a summary of the set of design principles, what they meant, their long term implications together with the PDW.

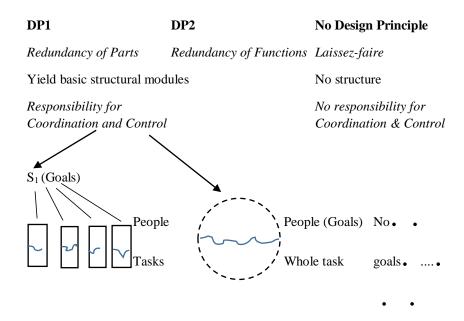


Figure 2. The Genotypical Design Principles

These three options in Figure 2 constitute a complete set – responsibility for coordination and control can either be with the actors, or not, or there is no responsibility for coordination and control.

In DP1 responsibility for coordination and control is located at least one level above the action. Therefore, the DP1 organization is autocratic or bureaucratic. It is the master-servant relation in action where those above have the right and responsibility to tell those below what to do and how to do it. It is a structure of personal dominance, a dominant hierarchy.

DP1 creates a competitive system so to get ahead, or even survive in some cases, one must compete. As soon as people are forced to compete, they have to look after their own interests, and self-interest comes to dominate life in a DP1 structure.

In DP2, responsibility for coordination and control is located with the people performing the task. The self-managing group, previously called semiautonomous (Emery F, 1980), works to a comprehensive set of agreed and measurable goals. Large DP2 structures are non-dominant hierarchies of function where all change is negotiated between peers.

DP2 has markedly different potentials than DP1. Rather than individual jobs, the whole group is now jointly responsible for every aspect of the task. Because they are working together to achieve agreed goals for which they are collectively responsible, it generates cooperation.

Over time DP1 deskills and demotivates, DP2 skills and motivates (Emery & Emery, 1974). DP1 causes dependency, fight or flight, pairing (Emery M, 1999) and amplifies communication problems and personality conflicts (Emery & Emery, 1976; Emery M, 2004). These design principles also appear to operate across the animal, biological or cellular and mechanical realms (Emery M, 2003).

Similarly, DP1 structures amplify, while DP2 structures attenuate errors (Beer, 1972, in Emery F, 1977) so only DP2 produces an organization "structured in such a way that its members can learn and continue to learn within it" (Emery M, 1993a, p. 2

The Ideals

So we come to the nature of ideals and ideal seeking and see the same pattern emerging. Just as Hillon gets to the brink of directly informing the reader of Fred's work in that particular area, he veers off on a tangent that avoids mentioning any of his foundational and famous accomplishments let alone any of the others.

Again, we confront an inaccuracy in Hillon's reporting. He claims: "The Ackoff-Emery ideals are meant to be approached as infinite limits, but only beauty in Emery's four ideals has this same quality. The ideal of beauty is the hope that drives us onward in all of our pursuits. Maybe it's the recognition that there is something we don't yet know, an order of things still to be discovered, or meaning beyond our grasp" (p586). This is utter drivel.

I can find nothing in this whole section of *Futures We're In* (1977) that could led to such a conclusion, in fact Fred says directly (1977, p78) "As I have defined it, the pursuit of the ideal is a pursuit of the infinite, and unattainable." He makes no exceptions.

Hillon goes on to say "Emery's other three ideals are pursued as an optimal balance among themselves and with their opposites". That is simply wrong as the above quote shows. Beauty is also defined with an opposite which Emery describes as "ugly, deforming, degrading or divisive, i.e. the kinds of purposes intrinsic to the maladaptive strategies" (p76).

In fact, Hillon's whole discussion of ideals here is again patchy, chaotic and misleading. He mentions that Fred relates homonomy, the first of the ideals, to the probability of choice, the first parameter of the choice model. He continues: "The next step in creating a sustainable form of industrial democracy, after homonomy, was to operationalize the ideal of nurturance into a similarly practical set of values to guide multiskilling according to a *redundancy of functions* design principle for greater adaptive capacity (Emery, 1967)."

This is gobbledegook. The reader would never know from Hillon's account that Fred carefully derived each of the ideals from each of the parameters of the decision making model (choice model) which themselves are derived from the 1965 four dimensions of the open system as in Table 1 below.

They would also never know that this was not in any way to create a sustainable form of industrial democracy as that had been achieved by the discovery of the genotypical design principles and the design of the PDW around them. Note also how he sneaks in the mention of the "redundancy of functions design principle" (p587) without any explanation of what it is or what it means.

There is nothing special about homonomy and nurturance, the first two of the ideals. All the ideals have equal status. Why aren't the other two mentioned in this context?

The reader would never know either that the real relationship of the ideals to 'industrial democracy' is that the ideals can emerge only in a DP2 structure. Because Hillon avoids giving the reader any clear information about any of the topics he touches upon in this paper, he does mention a garbled form of it in the following quote: "Although the six criteria are experienced individually as psychological factors, they are generated and safeguarded by a social group exercising responsible autonomy in its own work" (p586). So a self managing group in a whole DP2 structure where they hold responsibility for coordination and control has become a social group exercising responsible autonomy. The first expression is that of a clear, rigorous

operational definition while Hillon's is just an assortment of words. Readers would also never know the design principles apply to every organizational structure, whether it is work, family, voluntary organization or governance.

Hillon continues to seriously mangle everything he touches here. "As noted in the second postulate, individuals can only sustain the ideal-seeking state temporarily because it is exhausting. An enterprise needs redundancy in this function. Perhaps that is why Emery (1997/1977, p. 158) imagined a healthy adaptive organization as a habitat for 'the support, nurture, and protection of the efforts of individuals to imagine and aspire to the unattainable" (p587).

An enterprise needs redundancy in this function —which function? Ideal seeking? What sort of redundancy? There are two forms of redundancy possible in an organization, one form in each design principle.

Fred didn't imagine any of this at all, he carefully worked out the relationship between the design principles and the ideas from the relation of instrument and system as spelt out by Ackoff & Emery (1972, pp31-32): "An instrument functions as a lower order of system than the system that uses it" (Emery, 1977, p100).

In systems based on the first design principle, variety of behaviour is decreasing, the range is restricted and will be at a lower level of multi-goal seeking or goal seeking behavior. The individual is an instrument of the system.

In systems based on the second design principle, the variety of behaviour is increasing, the range ever enlarging and so people will function at a higher level including ideal seeking. The system is an instrument of the individual. "Only organisations based on this principle can be expected to develop and nurture ideal seeking individuals" (Emery, 1977, p100).

These last two points, that of rigorous operational definitions and deriving answers from known, i.e. validated relations, illustrates the fact that Fred was a *scientist*. He didn't just write stuff, he continually tested ideas and concepts in practice, reality, until he was sure his new concept or practice worked. Far from imagining, he did the hard work required in genuine scientific enquiry to make significant breakthroughs and change.

In the section on socio-ecological learning, Hillon continues with some disjointed notes on introducing participative democracy again without explaining what it is. He uses only old sources most of which look back on the difficulties first encountered in the early days of experimentation and omits sources such as Fred's (1994) paper on the Australian experience of work reform. We have already noted that he omitted discussion even of the foundation paper which describes the PDW and my later paper (Emery M, 1988) which describes variations on how to use the PDW to avoid all the pitfalls encountered in those early days.

Then suddenly we move to a section on "strategic planning in an ecological systems context" (p587) which is particularly confused: this strategic planning "addresses the relationship between the system and its external environment, an interdependence (so far so good) guided by values derived from the ideal of humanity." No it's not. The Search Conference which is what he is talking about here is a straight application of the open system with its four dimensions into the design of the event. The first phase deals with the L_{22} , the second the L_{11} and the third integrates the two as the community learns (L_{21}) and plans (L_{12}) simultaneously (Emery M, 1999).

He continues: "In this application, it may be helpful to think of humanity as a theoretical abstraction of homonomy to the societal, global, or species level" (p587). I can't make head nor tail of this statement – humanity and homonomy are both ideals, abstractions in one sense, or is he referring to humanity as the people?

"The combined applied knowledge from Fred Emery's entire career as a social scientist is present in the Search Conference (SC), a participative democratic open socio-ecological systems strategic planning methodology. This approach is designed to support a group of individuals – each containing knowledge on a particular piece of the problem that confronts them – to sustain a temporary ideal-seeking state throughout a 3-

day planning process" (p587). Definitely not. It was learnt in the very first Search that there were strict limits on how long people could sustain intensive work. We restrict our Searches to two days and two nights. We do not expect people to sustain a temporary ideal seeking state throughout. Once the ideals have been elicited they become built in as the foundations of the work and are progressively translated from each phase of the event into the next. For maximum creativity, the work should be continuous but fitting circadian rhythms, not the normal 9-5 pattern which will get the normal 9-5 result.

"Needless to say, it is an exhausting experience" - no, not at all. The danger is that it is so energy generating that some people can get very high, leading to the danger of emotional overload.

"Please read Participative Design for Participative Democracy (1993) for a thorough overview of the process" (587). There is only one paper on the SC in the entire book which is primarily concerned with the design principles and their implementation. Incidentally that paper was written by me as was most of the development of the SC from the early 1970s culminating with *Searching*, 1999.

Practical importance of the ideals

Hillon could have least followed this up with a mention of the ground breaking work on the ideals and maladaptions in a research report using Search Conference records to the Australian Government (Emery & Emery, 1979). But there is nothing like that which could have given the reader a clue as to why he was so worthy of honours.

Here we show you a little of what Hillon could have included so the reader would have an up to date, accurate picture of the ideals and their practical importance to the whole question of futures and strategic planning. This data is extracted from the final report on *Project Australia: Its Chances*. This was a piece of research commissioned by the Australian Government into "the state of the nation" (Emery & Emery, 1979, 1997). Their question was 'what ways, if any, exist to units this nation to pull together and become a 'clever country'? They wanted a solid foundation of data on which they could create their strategy. Obviously it was research with the most pressing pragmatic implications. The data came from 94 reports of 114 Search Conferences held in Australia between 1973-1978. In some cases a series of Searches had been held and collated into a single report.

Table 1. the classificatory scheme and its roots (Emery & Emery, 1979, 1997, p338)				
		Possible scenarios		
			Maladaptive	
Parameters of open	Parameters of	Adaptive	Passive	Active
system	choice			
L_{11}	Probability of	Homonomy	segmentation	Law and order
	choice			
L ₂₁ *	Probable	Nurturance	Dissociation	Evangelicism
	effectiveness			
L _{12*}	Probability of	Humanity	Doomsday	Eugenics
	outcome			
L ₂₂	Relative intention	Beauty	Superficiality	Synoptic idealism

^{*}from revised edition of Futures We're In, 1997

In this extracted table, we see immediately the meticulous longitudinal development of the ideals from their foundations in the parameters of the open system and the model of decision making. Applying this theory to our frequency data, we had to elaborate some of the scenarios with two levels of homonomy, at the national and community/local levels. Similarly, there were 4 subcategories of nurturance and 5 of humanity.

Analyzing this data provided the government with a wealth of data not only on which to build a set of carefully designed strategies but also alerted it to the signals of grave dangers appearing in the record, maladaptions which could spell trouble for Australia in the future.

Educational Paradigms

Then there is more nonsense about the ideals ending with "pursuit of the ideal of humanity was the remaining challenge of Emery's life, so he turned to educational paradigms" (p587).

Bunkum. As Fred says (Emery, 1980, p40, the stimulus for this piece of research was two fold, coming across Northrop Frye's *Fearful Symmetry* and a question from Michael Gloster, a colleague who was studying non formal education. Frye's work showed him exactly where McLuhan had derived his insights about the role of the media: in "the fearful implications of the Locke/Newtonian view of the world" (Emery, as above). Fred had been searching for the basis of McLuhan's insights and the questions they posed for the role of media and learning in our lives.

However despite this in black and white on the first page of the article he has supposedly read, Hillon once again insists on his emphasis on alienation, in this case, that Fred was addressing alienation from one's learning. Again we see that Hillon's statement of alienation is just fanciful.

Hillon does manage a few sentences about the two educational paradigms after even more irrelevance, but it is once again so fragmented in its presentation that I doubt anyone would be any the wiser. He does here, however, have a better stab at it than any of his previous presentations of substance. He sums up his inadequate explanation with an almost accurate statement: "In simpler terms, the new paradigm is built on evidence that anyone with the patience to observe their environment can learn. It follows that a focus on perceptual discovery and thorough data collection from multiple perspectives might redefine intelligence as the grasping of structure and factors relevant to a particular problem or situation" (p589). Hillon has substituted 'patience' for 'a functioning perceptual system'.

You would not know from Hillon's account that the paper is a thorough investigation of how the human perceptual system works.

It shows that the old theory of how our perceptual system works, based on the model of a mechanical universe, with each of our discrete senses recording discrete pieces of information which is fed into the black box where processes such as association happen, but not fully successfully, to try to weld it all together. So according to the old theory we have humans walking around who do not have adequate knowledge of how the work works so we need to send them to school to top up this inadequate knowledge. After years in the formal educational system we may have enough information. We call this primarily abstract information, 'scientific'.

It turns out that rather than a fragmented sensory system, we actually have a unitary perceptual system which directly, without mediation of any kind, extracts meaningful knowledge from our surroundings, including other people. As we age we see invariances which build into highly sophisticated theories of how the world works. up We call it 'common sense'.

The old theory on which all our educations systems have been designed is wrong.

This new knowledge has huge implications for just about every aspect of our functioning and most particularly the fundamental design of our educational systems around the world. But Hillon says almost nothing about any of that: "The first step was to redesign education to welcome learners back, to restore a sense of belonging. Then the nurturance could begin in earnest" (p589).

After he introduces Educational Paradigms which is about the perceptual system and epistemology, we are plunged back into Emery & Trist (1973) for a long rambling discourse about turbulent environments. He should have included a summary of that in a section on the open system. This is followed by similarly long rambling paragraphs about Angyal. Why are we treated to so much of this old material when Fred continued to build on them in several ways? Why is none of that mentioned in any coherent manner?

After all this meandering around to no destination with a foot in reality, we arrive at a section called 'New Insights: A Science of Change'.

In some ways, this is probably the most accurate and useful section of the whole effort as he overviews Fred's contribution. He acknowledges the chasm between being a scientists who tests theories and concepts in practice and "the academic mob wielding pitchforks and torches" (p591). After such a disappointing effort throughout the article, he is positive about Fred's work: "There is a science of change, and we have an ideal example to follow" (as above). It makes me wonder why he did such a poor job of informing the reader about this example.

Then we have 'Legacies: Learning to be Purposeful' which is again totally inadequate. He mentions my work on the modified PDW and efforts at diffusion. This is followed by: "In addition to all of the books and articles he left behind, the enduring legacy on my bookshelf is the three-volume Tavistock anthology, The Social Engagement of Social Science.... so that we can aspire to do better in our work" (p591). It is a shame he didn't use more of it to provide a more comprehensive and adequate picture of Fred's work.

"Finally, the hidden legacy of Fred Emery's work is to be found in practice among all of the communities and small businesses that followed his advice to plan as purposeful systems in turbulent environments. Many who have learned and benefitted from his work have gone quietly into more desirable futures" (as above). That is perfectly true and continues to happen today, not just in communities but in all types of organizations with ripples through to whole industries and other branches of science. The whole suite of OST methods including Unique Designs (Emery & deGuerre, 2007) all structured on DP2, has meant that virtually any aspect of human endeavour can be successfully researched and a solution implemented.

Hillon's conclusions are a mixed bunch. He gives Fred high praise: "Fred Emery... accepted the higher responsibility of social science to develop and apply problem-oriented theories to improve the human condition. ... Emery searched throughout his life for a way to restore the decency and dignity of work that had been lost in the adoption of modern industrial management. He succeeded and offered convincing evidence" (p592). He concludes that "we chose not to believe that a healthy adaptive organization could be a habitat for "the support, nurture, and protection of the efforts of individuals to imagine and aspire to the unattainable" (Emery, 1997/1977, p. 158) (as above).

That America has mainly chosen not to believe is true but it is not true for the rest of the world. There are case studies of organizations that have changed their design principle from DP1 to DP2 from around the world. And there were cases from the USA in the early days (O'Toole, 1972) and again until neoliberalism became the flavour of the month in America.

The rest of his conclusion is similarly USA centric. He claims: "We have no memory of a time before the Taylor-Weber paradigm" (p592), that we have accepted a dysfunctional industrial system to suppress human potential. However, he blames a "terminally flawed economic system" rather than the genotypical design principles, the basis of the social system.

This suggests that Hillon may not understand these principles and their far reaching, long term effects at all. That would be consistent with his almost non existent description of them. He has certainly not read, or understood either the original publication (Emery & Emery,1974) nor the selection of effects of DP2 in Emery M (2008). And if he has, why has he not attempted to inform the reader?

In addition, he seems not to know that OST includes a body of research on the ancient cultures around the world which used DP2 as their governing principle rather than DP1 which

governs most of the Western world today. But even a careful reading of Emery & Trist (1965) and much of the work that followed it would have enlightened him. "Most of the collecting, hunting and early agricultural societies appeared to have lived in such environments (i.e. Type II environments). Many areas of modern societies are still like this" (Emery F, 1977, pp6-7). The people in these societies choose paths that lead to a common goal, quite different from the individually oriented competitive behaviour we see today. Again, Fred makes it explicit that competition entered the system with the advent of the Type III environment, which arrived with the industrial revolution.

Page 9 (1977) spells out precisely how and why the change of design principle happened in the industrial revolution. "Whether the instruments are machines or human organisations they will be expected to be *fool*-proof, they must be a reliable means of carrying out what is tactically necessary regardless of the reason why...the elements constituting the instruments must be standardised, interchangeable and to all intents and purposes indistinguishable from each other",...mechano-like organisations" seeking to concentrate a much power as possible at the top with as little power as possible delegated down.

This is still a 100% accurate description of the essential nature of DP1 structures and cannot leave any doubt about how and when the West went to dominant hierarchy from top to bottom.

There is a lot of confusion about this – while the Monarchy and court were organized into DP1, before ordinary people were forced into the factory system, they were left to organize themselves in the fields and cottage industries and they chose DP2, working in self managing groups.

There is no excuse for a student of OST not to understand this history.

Conclusion

The article is full of old sources which serve a purpose to show the chronological development of ideas but it is severely overdone. Fred's work, published and unpublished, is enormous and covers a huge range of subjects but even those most famous, insightful and with maximum impact on the field of social science were barely mentioned. Even these mentions are patchy, incomplete and leave the reader wondering why he is famous.

Hillon's contentions about Fred's single minded trajectory through life, his emphasis on alienation are totally contradicted by the data. Fred's life was anything but a linear sequence, exactly the opposite in fact as he constantly dived backwards and forwards into different areas as things popped up, including events and changes in the world that required investigation and possible solutions. You wouldn't know from reading this, for example, that Fred wrote a sizable collection of works on war, peace and defence with an emphasis on strategy, particularly the oldest strategy of the indirect approach. As Hillon explains strategy is his "chosen field" (p591) it is surprising this aspect of Fred's work gains so little attention.

The editors have rejected a totally accurate and informative picture of Fred's work in favour of a most unfortunate account of the work of this great scientist. It could have been so much more given that Hillon had the wealth of Fred's work at his disposal. Why he chose to ignore most of it, decided to impose an imaginary framework over what he did report in such an incoherent fashion or why the editors decided to publish it, are questions readers should ponder.

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(Many Emery references are now available at www.socialsciencethatactuallyworks.com)

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