



By: Eugene Fernandez

### **(The Epigenetics of Organisations)**

**Banding together to become even smarter is what we do at a cellular level, likewise learning with and within a community of others guarantees us survival and as the new biology is teaching us – survival of the fittest groups rather than survival of the fittest individuals.**

Managers, Change Agents, Trainers and Organisational Development practitioners could benefit by adopting some of the insights from the 'New Biology'. Casting many strategies as a cooperative journey amongst individuals. Much of this is a reframing of familiar terrain, and some of it offers us fresh insights that can help to revitalize individuals and organizations.

Epigenetics which sits within the 'New Biology' frame is the study of how the environment influences and controls gene activity. Epigenetics positions each cell as a sentient being aware of its environment. Cells move towards what enhances growth and away from an environment that is toxic. Cells can learn from environmental stimuli and are able to create cellular memory. There is though only so much a single cell can do in isolation.



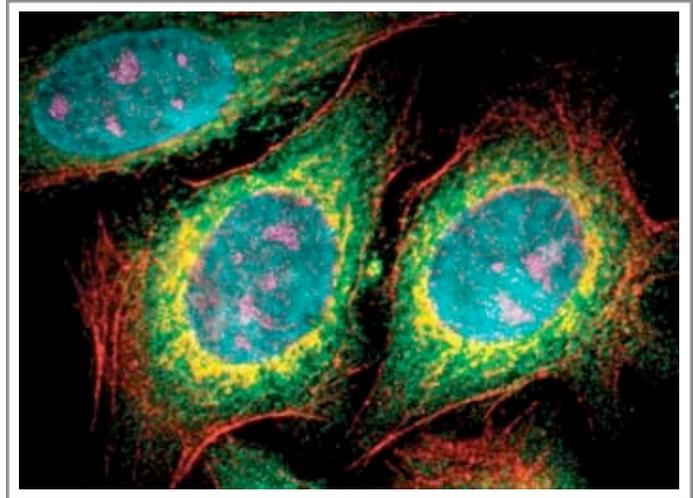
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Cells have learnt that the more aware an organism is of its environment the better its chances of survival.

They have learnt to band together and create ever bigger communities to survive, in doing so they also exponentially increase their awareness.

Cells are a model of a cooperative community. They specialise, maximize strengths, network within and across boundaries and learn at a rapid rate. And they do all this with precision and effectiveness.

What's also astonishing is the role that cooperation plays in sustaining growth and life. Symbiotic relationships exist across species and right down to microorganisms.



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The growing field of Systems biology studies these interdependent interrelationships; they are discovering that genes are passed on not only to progeny but also among members of different species. This speeds up evolution. Organisms can therefore acquire learned experiences from other organisms.

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Today's understanding of cooperation goes much deeper than the easily observable ones, biologists are becoming increasingly aware that animals have co-evolved and continue to coexist with a diverse assemblage of microorganisms that are required for normal health

Symbiotic relationships exist across species and right down to microorganisms. An example of mutual symbiosis is the relationship between [Ocellaris clownfish](#) that dwell among the tentacles of [Ritteri sea anemones](#).



The territorial [fish](#) protects the anemone from anemone-eating fish, and in turn the stinging tentacles of the anemone protect the clownfish from its predators (a special mucus on the clownfish protects it from the stinging tentacles).

[Anemone hermit crab](#), *Dardanus pedunculatus* forms [symbiotic](#) relationship with [anemone](#).



Picture Source: Wikipedia



Like a singular cell a lonely tree cannot survive for long on its own, the winds stunt its growth and the rain erodes the firmament and the nutrients on which it stands.

The tree flourishes in relation to others and in association with the forest, which filters the wind and nourishes the soil.

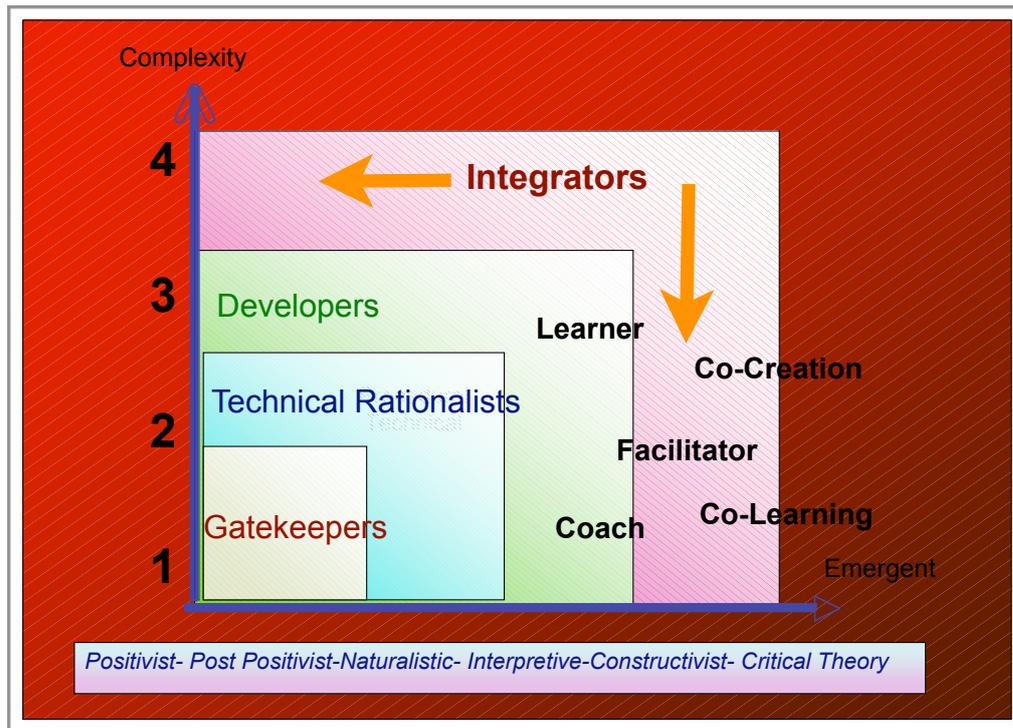
A forest like cellular communities is a triumph of interconnectivity and interdependency within and across organisms.



Interconnectivity and interdependency needs to be ennobled in our training and Organisational Development interventions.

Many training and change interventions are fragmented, and isolated; they are heavily focused on increasing the knowledge and understanding of the individual **in isolation** of the context and the group.

Many of these interventions and programs are also expert and hope driven. I.e. the focus is on the teacher or expert, injecting the learner with a new vision with the resultant hope by both the individual and the organization that this will create dynamic and sustainable change.



As contrasted above there is much that we can learn from nature. In the following paragraphs I contrast and draw on four modes of intervention, each with their own strengths. I have contained my comments to the domain of learning/training, these modes also apply to the domain of Leadership.

(Through our learning audit system Metanoa assists organisations to implement the most appropriate or a combination of the most appropriate modes)

### Gatekeepers

The first mode is that of the 'The gatekeeper/s', Exemplified by old world academia. The focus is primarily on the teacher as expert. It follows a master student relationship and primarily moves from deep

dependency to intermittent dependency.

Learning is contained and controlled. Knowledge is specialised and compartmentalized. This harks back to when Universities occupied the hallowed ground as gatekeepers of codified knowledge and through the process of specialisation, compartmentalised this knowledge.

Government also funded this position as 'guardian of public interest'. This is akin to a closed system and in biological terms exerts limitations to growth and survival.

This mode is useful particularly when there is a need to understand and learn about core principles and knowledge. There are a plethora of business schools whose experts take pride in teaching codified knowledge.



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## Technical Rationalists

I have termed the next mode 'Technical Rationalists'. Trainers, Industry experts and consulting practices signal that the real world is different, that they are a far cry from the old world gatekeepers.

Whilst the Technical Rationalist mode alludes to an environment that is open, innovative and synoptic, pulsating with the beat of the marketplace, the reality is that it is only marginally different from the mode of the 'Gatekeeper'.

In the first mode universities acted as gatekeepers or codifiers of knowledge, in the Technical Rationalist mode the industry corrals knowledge around the profession or guild. It establishes the standards and the operating norms of the profession, it codifies, entraps and excludes. The expert, giver of codified knowledge is still venerated.

The Practitioner is viewed as a technical problem solver operating within the prescribed rules of the profession and whose ultimate aim is to improve efficiency and performance. Progress is usually locked into the groove of the profession.

Both these modes have at its core a view that the expert knows best; people are viewed as 'Tabla Rasa' or a blank slate, an empty vessel ready to be filled.

In this model most Learning is contained (Competency driven) and controlled (Assessment/Quantification driven) with a focus on competition and individual achievement. Knowledge is specialized, and compartmentalized.

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And usually once the indenture is complete the learner is cast adrift into a world mired with complexity. This type of learning has its place in improving knowledge and skills but is limited in dealing with the complex issues faced by people and organizations.

I am not arguing that this is bad. Codified and professionalised knowledge has allowed us to develop a modern functioning society. However, it is limiting if it is the only model we prescribe or work within.

## Developers

Over the past two decades many have worked with what I have termed 'The Developers' mode where there is a focus on individual empowerment and growth through learning. Development of the individual is focused on applying iterative cycles of action and reflection. Knowledge is understood as non-predictable, non-deterministic, situation specific and contextualized. Multi perspective views are adopted. Theory is applied experientially and is applied to practice. There is an understanding on the nature of tacit knowledge and that we know more than we can say.

In this mode trainers and teachers are no longer gatekeepers and technical rationalists but have taken on the skills as coach and facilitator- Many have gone as far as being change provocateurs where the epistemology- is to disrupt, dissolve, fragment the models of knowledge of the learner- minimal to no effort is made to provide a replacement, since the purpose is to provide disjuncture in the mind of the learner and responsibility is devolved to them. Participants are no longer students but Worker- Learners



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Whist 'The Developers' are a radical shift from the previous modes. they do not go far enough. There tends to be an overly rational and psychologised view of the individual. Critically individual development and growth usually appears in isolation of the context and the group.

To use an old analogy 'the fish is cleaned but then thrown back into the polluted pond'.

## **Integrators**

I have termed the next mode "The Integrators". This mode explores a more holistic, systemic, context bound and qualitative frame. Integrators takes a 'Meta Systems' and Organizational Development view, consistently looking for means and ways to integrate the whole system or as much as possible of it within the learning and change frame.

Integrators encourage and support people to ask more complex questions, understanding that this challenges the system and themselves. They draw from the fountain of expert knowledge without venerating it - knowledge is reflected on and is used to inform practice. Theory is constructed not for its own sake but is grounded in practice.

Integrators focus on both the content and the process and the process of the process. Encouraging learning within a community of fellow learners and seeing this as an iterative process.

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Learning is enacted for the individual as well as the super and supra system.

Sustaining learning here is built into the very fabric of the intervention.

The learning specialist is a facilitator, co-creator and co-learner of the intervention. A prescriptive formulaic methodology is an alien concept, what is sought is a theory of one that fits the purpose and needs of the participating community.

For many trainers and Organizational Development specialists this is a risky place to be, as it pulses to a different rhythm to where many organizations are at presently. It is a desired state with many steps missing and a fuzzy pathway, if any. For many others though this is an opportunity to play and to co-create new futures.

All four modes have their place within the rich tapestry of organizational life, however given the magnitude of the global issues we face, we need to take on a Meta systems view and orchestrate broader, deeper and more interconnected strategies. These strategies need to be cognizant of the individual and the interdependent nature of the environment in which they operate.

Scientist Timothy Lenton in Nature states "that evolution is more dependent on the interaction amongst species than it is on the interaction of individuals within a species", and as stated in the opening paragraph survival of the fittest groups rather than fittest individuals. The move away from a focus on the CEO and towards enabling the senior team is signaling attunement to this new reality.



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In summary, contained within us is a community of more than 50 trillion individual cells. Each a sentient being in its own right. Likewise learning and change interventions drawing on the integration mode are an interwoven and interconnected activity operating with and within a community of others.

Our world is at a critical cross road. Our very future and the existence of life depend upon us transcending our limitations by evolving solutions that are a step above the thinking that created our problems. We cant do it alone. We can only get by with a little help from our friends.

This short article draws on some of the work of Lipton, B.H. Nitz, N.C. Goldberg, E. Siegel, D.J. Langer, E. Goldman, D. & Levine, M.

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Some of the organizations that Eugene has worked with using the Integrator frames have included: Mars, Bunnings, Social Change Media, Beak & Johnson, The Guild Group and Thomas Cook.

Eugene is a Managing partner of Metanoa who specialize in the areas of Integrative Strategies, Facilitating Senior Teams, Action Science, Organisational Change and Development and Leadership. He has also designed and lead programs for Leading business schools. He has over 20 years experience facilitating dynamic processes in organizations and has trained and educated over 5000 Leaders globally. He lives in Sydney Australia.

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