

In an earlier paper, *The Janus' Principle and complex adaptive systems in organisations*, the concept of the holon was discussed. This is a Janus-faced entity, which has two roles. When facing upwards, dependence or integration is the key – the holon is dependent on rules issued by higher order holons to guide its patterns of behaviour. The holon and its members conform to the high-level rules defined by the whole organism, often a naturally occurring hierarchy such as a tree, but in our case an organisation. When facing downwards, the key role is one of self-assertion or independence. In this role the holon and its members, (in themselves holons), work out complex adaptive strategies, generally working within a simple set of rules or guiding principles. In both cases, the overall aim is the survival and development of the holon and the organism of which it is a part.

The name 'holon' derives from the fact that these entities are both whole and part - 'whole' when they act within their self-assertion role and 'part' when they act in their integration role.

A number of key lessons from the natural sciences were concluded to be applicable to business organisations. In summary, these were:

- The self-assertion and integration roles of organisational holons need to be in balance. This works best when the rules handed down by higher level holons are simple and enable complex adaptive strategies to be developed to handle a changing environment.
- It is the extremities of the organism (organisation) that are most directly in contact with the external environment. Previously learned patterns of behaviour that have moved to the mechanical level of application, through repeated applications, will need to change to adapt to a changing environment. This uses the existing rule set in new ways. The move to the 'mindful' or intellectual application level is always high risk and carries with the probability of short-term failures. To make this work well, higher level holons need to 'give permission' for this learning process to occur, either explicitly or implicitly.
- When externally imposed levels of stress are very high, even adaptive learning is unlikely to produce new patterns of behaviour that will cope with a significantly changed environment. In this case, the learning has to move beyond adaptive learning that applies the existing rule set, to creating new sets of rules, that then lead to new patterns of behaviour. The risk is now even higher than before, and the 'permissions set' that will enable this to happen is broad and complex.
- Human beings do not, however, always play by the integration rules. Uniquely in nature, people display intentionality. They process incoming signals, especially those from above, and interpret these signals to eliminate noise and add meaning. If the meaning is threatening, they will break the rules to ensure survival. Blind observance that might lead to no pay cheque at the end of the month is not a popular past time! Creative rule-breaking generally says more about the over-rigid and out-of-touch nature of the integration rules than it does about the rule-breakers.

That last paper focused on the relationships between holons in organisational hierarchies. In this

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1 The Roman God of gates and doors, who hence had to face both ways

paper the relationships between holons in organisational networks will be considered. Both formal and informal networks are covered. In other words, there is no power element to the relationship, in the sense of formal power as assigned by high level holons in an organisational hierarchy. It is recognised that there are many other sources of power and influence, such as knowledge and skills, commitment, risk taking and so on. These are normal dimensions of the negotiating model and power will be considered when that aspect of holon-to-holon relationships is covered later.

### More lessons from the natural sciences

Before we consider the nature and purpose of network relationships in organisations it is probably worthwhile re-visiting a few key lessons from nature.

#### “Reculer pour mieux sauter” (Drawing back to jump forward)

In nature, new branches of evolution do not stem from the adult version of previous branches – they stem from immature examples of a species. There are many examples of infants that do not display all the characteristics of the adults of their species, but do display some of the characteristics of a new, higher level branch of the evolutionary process.

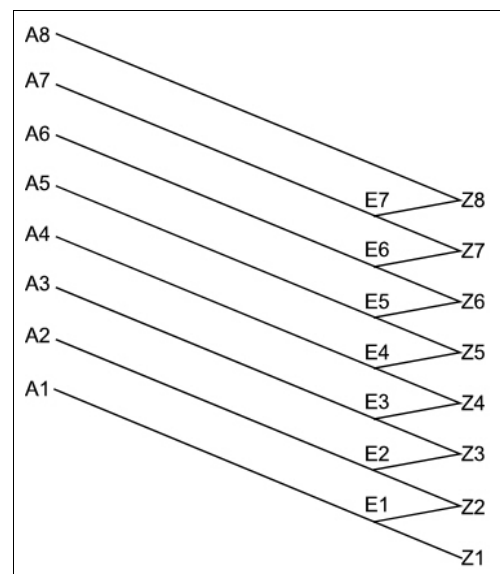
For example, similarities in simian<sup>2</sup> embryos and human adults include:

- The disproportionately high ratio of brain weight to body weight
- The absence of brow ridges
- The closing of the sutures between the bones of the skull being retarded to allow the brain to expand
- The direction of the line of sight being at a right angle to the spinal column
- The scantness and late appearance of body hair
- The retarded growth of teeth

The implication is that the development – innovation – of homo sapiens is more likely to have started with embryonic or immature examples of simians than from adults from that species. Given that the development of a new evolutionary branch is equivalent to a high level holon responding to high levels of stress in the local environment by developing a new rule set that will enable new patterns of behaviour, this is entirely consistent with the third lesson summarised at the beginning of this paper.

This branching out of evolution from immature specimens is illustrated in the diagram to the right, first suggested by Garstang<sup>3</sup> in 1922. In summary, the concept is as follows:

Z1 to Z8 is the progression of zygotes (fertilised cells) along the evolutionary ladder. A1 to A8 represents the evolutionary progression of adult forms that develop from each zygote. The line from Z1 to A1 thus represents the process known as ontogeny, the transformation of fertilised egg into adult.



<sup>2</sup> Belonging or related to the family of monkeys and apes  
<sup>3</sup> J Garstang ~ Zoology ~ Linnean Society London ~ 1922

There is, however, no line that directly joins A1 to A8. If such a line existed, that would represent a process known as gerontomorphosis – the evolutionary transformation of an adult form. The problem with gerontomorphosis is that it cannot lead to radical changes or new departures. All it ever does is to lead to one more step in the same direction – often to a dead end in the maze of life.

The sequence that enables evolutionary development to occur branches off from the line of ontogeny, at the point where the unfinished embryo exists – for example, from Z4 to E4 to Z5. The leaping off point for the sudden advance in a new direction is the more plastic and less committed stage of development – the embryo.

Hence, to illustrate, if A7 is the adult primate, then E7, the embryonic primate, would be the branching off point that leads to A8 – homo sapiens. As previously noted, it is E7, the ancestor of man, that shares far more of the characteristics of the A8 adult, when compared with the adult primate A7. This process of evolutionary retreat from specialised adult forms - drawing back to jump forward - is known as paedomorphosis.

The second lesson noted above suggests why it is immature specimens of a species that are the source of evolutionary developments. In mature specimens, the existing rule set has been transferred to the mechanical level of application, which is where the risk of rigidity arises. This simply means that mature specimens, in evolutionary terms, are not a 'most-likely' source of rule-breaking, adaptive learning in a significantly changed environment.

Applying the lessons of evolution, the focus of innovation is unlikely to have as its start point the final, mature version of the 'established way of doing things'.

What is needed is 'regression to enable progression' – drawing back to jump forward. This means going back to the 'infant version' of the previous solution as a source of ideas about how the current problem can be resolved. What was it that was intended as a solution, to the then problems, that subsequently evolved into a blind alley of development, that led to 'today's no longer workable' solution?

An even more important question is about how the organism knew that there was a need to invent a new rule book. The evidence points firmly in the direction of feedback. In the case of nature, this is the local environment providing information that implies that the current design is not working well. Similarly, neither do any new patterns of behaviour that stem from adaptations flowing from the existing rule set. When environmental stress is high, the only route that leads to survival and ongoing development is regression leading to progression – and that means innovation.

This leads to another insight; without feedback there is no development or progress. It is feedback from the environment that signals the maturation of the development of the species to the point of over-specialisation or rigidity. It also signals the need for regression to an immature version of the species that will enable a new evolutionary branch to develop, through a new set of rules.

As with all innovation, there is considerable risk – all innovations are a 'leap into the dark'. The history of evolution is full of developmental dead ends – species that appeared and then disappeared. But the risk was evidently well worth taking as without it there would have been no development of higher order species – even although some examples of homo sapiens that have

been observed in recent time, strutting the world stage, might give some pause to that thought!

The capacity of evolutionary innovation is taken here as the basis for thinking about network relationships. The reason is that there is considerable evidence that suggests that the best innovation comes from problem resolution and that the best problem resolution comes from cross-functional teams – in other words through network relationships.

Before considering how innovation is developed through network relationships, and how the 'reculer pour mieux sauter' concept should be applied, first a quick gallop through how power and influence are differently applied through network relationships, when compared with the formal hierarchy.

### **Neither self-transcendence nor self-assertion**

One way of expressing the integration role of holons in an hierarchy is that self-transcendence is required. The holon subordinates its own rule set – used for self-assertion in its independent activities – to the rule set defined by higher level holons. This, however, makes no sense where the relationships in question are across organisational networks, where there is no formal power to issue rule sets and demand conformity with them. A better model is that of assertion – with the 'self-' omitted from the front end of self-assertion. The label that is most often used is that of assertiveness.

A good way of expressing the concept of assertiveness is summarised as:

- All parties have rights.
- All parties have the right to insist on their rights being honoured by other parties.
- This right, however, can not be claimed in a one way relationship.
- If one party wishes to state a claim to have its own rights honoured by another party, it has to accept that the other party has the same rights in return.
- In other words, one party can insist that it has the absolute right to be heard, and that the duty of the other party is to listen to what is said. In return, however, the other party also has the absolute right to be heard, and the duty of the first party is to listen.
- Aggressive behaviour can thus be loosely defined as the insistence by one party on its own rights, at the expense of another party's rights.
- Submissive behaviour can be loosely defined as one party accepting another party's rights at the expense of its own.
- Assertive behaviour can be loosely defined as a two way acknowledgement of each other's rights between two or more parties. There is, by definition, a process of reaching agreement on the basis of each party listening to the other's position, and the attempt to reach a settlement that preserves everyone's interests or at least their priority interests.
- Assertive behaviour often involves confronting the issues to be resolved, in a very open way. Provided it is the ISSUES that are confronted and not the PERSON, this does not challenge the healthy nature of assertive behaviour as a basis for transacting between people.

## Network relationships - another intentionality exception

So far we have considered the patterns of behaviour of holons. In the case of network relationships, mostly the activities belong to individual members of organisational holons. Except in the sense that each human being is a highly complex hierarchy, that means that we are moving away from the concept of organisational holons – or are we? In practice, while organisational networks comprise sets of individuals, in the vast majority of cases, the behaviour of the individuals is still constrained by the objectives and rule-set governing the patterns of behaviour of the holon, when it is operating as a unit.

In this sense, the holon-member participating in network activities is doing so to represent the objectives and rule-set of the holon of which the individual is a member. The intentionality arises as the individual, operating on behalf of the 'home-holon', is breaking the up-and-down nature of the conventional relationships of organisational holons and hierarchies – in pursuit of the achievement of 'home-holon' objectives. In the main, these are informal networks that are operating, and that means that they are complex and volatile in a way that the formal (designed) organisation structure is not.

The achievement of objectives could be at the expense of the achievement of the objectives of the holons to which other individuals belong, across the network. This would not, however, be an expression of assertiveness but instead of self-assertion. As a generalisation, that would be more likely to lead to conflict than to collaboration.

To make sense of this, and to elaborate the style that is required for network relationships to add value to the holons of all participating members, as well as the organisation at large, it might be as well to pause to reflect why network relationships form in the first place. When performance problems arise, or when other opportunities occur for performance to be improved, it is rare for significant gains to be made by people operating solely within their 'home holon'. The reasons for this are manifold, but here are a few:

- Most processes that create value for customers and deliver that value through the organisation cross many formal functional units – or in our jargon, organisational holons. To change just one part of a process, within one organisational holon, so as to deliver more customer value, is a touch difficult.
- As a generality, good information is needed to underpin good analysis, to identify causes and design new patterns of behaviour. Often the sources of information will lie outside the holon that originates the initiative to change behaviour to improve performance.
- Changed patterns of behaviour in one holon will generally imply a need for changed patterns of behaviour in several others. Unless the inter-connected changes are worked out through the participation of all the people involved, disconnects in new patterns of behaviour are likely to develop.
- To accomplish anything worthwhile in organisational behaviour requires the application of power. Power is generally distributed in varying degrees throughout organisations. Unless all the power required to develop effective new patterns of behaviour is tapped into, the change process is likely to stop dead in its tracks at some point.
- As noted earlier, research has shown that much of the best innovation comes from cross-functional problem resolution. Innovation arising from one part of an organisation acting alone is rare. Even if it does, innovation in one part of the organisation is likely to drive a need for changes in behaviour elsewhere.

## **Innovation, power and influence**

What is emerging is a three-dimensional model. First, there is a need for a power-sharing model across organisational networks – power is an enabler of innovation. Second, there is the lesson that innovation is unlikely to flow from continuous improvement of what we already do – innovation mostly flows from ideas about organisational practices when they were in their immature, more plastic and less established stage of development. Finally, there is the critical role of environmental feedback - which is the trigger that starts the innovation process.

Take the power dimension first. One way of thinking about designed organisations is that structures distribute power, and processes distribute tasks. It is networks that distribute influence – and influence is one of the key sources of power anyway. As it happens, there is already a perfectly acceptable model for thinking about influence in networks, and it is that of negotiating. As is widely recognised, power is at the heart of all negotiating. It is not too difficult a step to make to compare the win-win approach to negotiating as being just another way of expressing the concept of assertiveness outlined above.

This is not exactly a new thought. To illustrate, David Lax and James Sibenius put forward the proposition that negotiating is at the heart of all management as long ago as 1986<sup>4</sup>. Only the extremely power and status conscious would ever argue that the negotiating model is not appropriate for all management. For managing network relationships it is fundamental.

But there is a paradox here. The power to accomplish innovative change is commonly distributed across several organisational units. Giving up power – the loss of self-assertion involved in adopting the assertiveness model for managing network relationships – is a route to the acquisition of power; the 'new power' is a share of the total power of members of the problem resolution group, and that of their 'home holons'. Added to this is the opportunity to influence, through negotiation, the actions and outcomes of cross-functional problem resolution initiatives.

There are many sources of power, not least of which are knowledge and skill, information, commitment and risk taking, resources including money, relationships / networks, legitimacy, time and effort. Cross-functional problem-resolution groups hence always have much more power than any single holon acting alone.

Again, this is not a new thought – the whole is greater than the sum of the parts. What is strange is that so many managers, in spite of the evidence (feedback) that it does not work, still try to apply command and control management practices. While these are and always have been daft in the hierarchical sense, they are sheer lunacy when applied to network relationships. It is, perhaps, the attempt to apply power-based practices across networks that is one cause of so much of the 'internal politics' that are so prevalent in so many hierarchical organisations.

As a footnote to this section, it is possibly a signal of the lack of understanding of the role of negotiating internally within organisations that so little development in this skill set actually goes on. Unless, of course, the managers in questions are negotiating commercial contracts or deals in industrial relations ... And even then sometimes not ...

## **Regress to progress**

Undoing and re-doing – sometimes referred to as un-forming, reforming and norming – is one version of a structural model for organisational changes processes. This is based in the recognition that old ways of doing things have to be dismantled before new methods can replace

<sup>4</sup> The Manager as Negotiator ~ David A Lax and James K Sibenius ~ The Free Press ~ 1986 ~ ISBN 0-02-918770-2

them. Part of the logic is that, typically, there are going to be many people with a vested interest in the maintenance of the status quo – in the short term at least. These are the people who were the inventors of the current model, or who grew to power through using the current model. Unless the 'undoing' stage is thorough and complete, what comes out the other side of the change process may be cosmetic at best. A typical example is the organisational re-structure. Re-drawing the lines on the organigram seldom ever changed anything – except the organigram, that is.

What is perhaps less widely recognised is that exactly the same model is, or should be at work for changes that occur at a more detailed level than the whole organisation. This is where the important issue of permissions comes in again. People need to know that it is OK to give up power to acquire power. They need to know that it is OK to challenge the existing orthodoxies. They need to know that it is OK to try new ideas, even if that means that the risk of failure, as with all innovations, is high. Finally, they need to know that if the 'wheel does come off', the consequence will be a stage of shared enquiry and learning, not an inquisition and the search for a sacrificial goat.

Implicit in all of this is the willingness to 'go back to basics'. In this context, that means re-visiting what it is that the organisation is trying to achieve, in a changed environment. It means not just challenging the design of existing practices; it means challenging the very need for their continuing existence. It means starting thought processes with a clean sheet of paper, and with a complete restatement of business objectives, both in the short and long term.

It could be argued that 'dumping the way we do things' would represent a loss of the learning developed over years. This would, however, be to misunderstand what is going on. The learning that is embedded in the current system, while valuable, has led to a point where there is a mismatch between the current needs of the organisation and what is being delivered. The need is for there to be analysis of why that has happened and how to close the new gap. The learning embedded in the existing system will either get re-used 'as is', or it will get adapted – or some of it may even get scrapped as no longer appropriate. The process is one of re-cycling the learning; not losing it.

Also implicit in all of this is awareness of the existence and nature of the problem to be resolved. This is where feedback comes in to the system. The search for new rule sets should be in response to externally sourced signals pointing to the need for fundamental change – not a desire to tinker with the existing way of doing things in a search for incremental improvements.

In passing, it should be noted that the word 'resolved' is used rather than 'solved', since its use implies root cause analysis as well as analysis for immediate cause. The developmental actions that arise thus include long term problem resolution action as well as tactical or holding action, the latter being designed only to eliminate or at least minimise the immediate consequences of the problem. Hence, problem resolution action, in this context implies the inclusion of action to eliminate repeats, collateral consequences or other problems that would arise from the same root causes. This leads nicely on to the issue of feedback.

## **Feedback – the enabler of development**

In organisation management terms, root causes are always likely to include 'management'. If this were not true, it would be necessary to wonder what effect 'management' is having on the performance of the organisation. If 'management' is having some effect, then 'management' is part of the problem; if 'management' is having no effect, then it is, by definition, part of the problem, but, in this case, also redundant.

Feedback in this context has three distinct aspects. The first is the environmental feedback that drove the (cross-functional) search for problem-resolution innovation in the first place. The second is the information exchanges that occur between members of different holons in the network, so that each understands the needs and priorities of others, and the impacts that will occur on their operations – if no change occurs and if it does. The third is that the new learning that is developed should be able to generate other, possibly more fundamental changes, as well as the immediate problem solving actions. The fact of the matter is that there are always management lessons to be learned. To illustrate:

Suppose that the external environment has changed in such a way that the continuing survival of the organisations is at risk. As we have seen, when the environment exerts very high levels of stress, this implies a need for the creation of a new rule set, rather than an adaptation developed using the existing rule set. The implication is that the organisation has to respond to some major change in the environment. This raises two important questions.

The first is about what it was about the organisation that allowed the external change to grow to a point where the organisation's survival is at risk? Why were signals implying the need for change not picked up earlier, before the need for a major rule change was needed? How is that management has not at least started the process of developing a more resilient organisation, where processing, interpreting and actioning incoming signals for change is a way of life for everyone? In other words, to repeat an earlier lesson, what is stopping the extremities of the organisation behaving as environmental sensors, to ensure the ongoing survival of the organisation, instead of being the parts where rigor mortis sets in?

The second is about the characteristics of the organisation that means it is responding to external changes, instead of creating them for other, competing organisations. In other words, why is the organisation not the one that is leading the field, creating difficulties for others which then have to play catch up – just as the organisation innovates again, to stay at the head of the pack?

Either way, the feedback will be signalling changes that need to be stimulated by management. Either way, those changes will be important to ensure the longer term survival and development of the organisation. As the problem resolution work done by members of an organisational network should always include this element of root causes analysis, and as that is always likely to include issues for 'management', the process will stimulate and provide feedback to management. And management, like every other holon in our model, needs good, objective feedback if it is to learn and develop.

## **The negotiating model**

One last set of thoughts about the applicability of the negotiating model. The well-known fact that power is at the heart of negotiating has already been discussed. What is perhaps less well known is the way that people in negotiating relationships perceive their power. A very common tendency is for people to assign less power to themselves than they in fact have; they also tend to assign more power to the 'other party' than they in fact actually have.

In typical negotiating sessions, this can lead to to aggressive / defensive positions. If both (all) parties take up this type of position, then emotional gaps can rapidly develop between the parties. These can be extremely difficult to close, and are one of the most common causes of failure to reach agreements that are satisfying to all parties involved. Next steps when this happens include invoking higher levels of power and forcing decisions on reluctant recipients of those decisions. This often leads to the 'I'll get you next time around' position. Other next steps include internal

politics, internecine warfare and silo mentality.

These problems arise not through the application of the negotiating model; they arise through its unskilled application. Skilled negotiators tackle the power issue before the event, and work to develop a position of equal power, both perceived and actual, so that it is easier to achieve win-win solutions. This approach is based in the recognition that the whole is greater than the sum of the parts, and that this rule very much applies to power in networks.

A quick skirmish through some of the basic rules for negotiating suggests that the rest of the model fits nicely with the needs of managing network relationships.

- Always go for a win-win – positioning is vital – this expresses the clear need for an explicit statement up front that the aim is to arrive at an outcome where all parties achieve their priority objectives.
- Aim high across a broad range of issues – implies both a solution that will not be just another 1% creep along the existing direction and one that is complex rather than simplistic. This fits nicely with the notion that mono-dimensional initiatives rarely work and also implies that all parties' needs will be looked after.
- Find out their shopping list – trying to understand the other parties' wants and needs is exactly in line with the assertiveness concept outlined above.
- Search for variables – there can be no exchange of concessions unless some of the issues the various parties are trying to resolve have variable values, as distinct from fixed values.
- Focusing on priorities – implies a degree of risk assessment, so that less important issues can be let go, in favour of top priorities. Is an enabler of the trading concept below.
- Trade concessions – implies that all parties will collaborate in agreeing to do things to help other parties achieve their priority objectives.

None of this is to suggest that the negotiating model is equivalent to network relationship management. It is to suggest, however, that the negotiating model is a good enabler of effective management of network relationships. What a shame, therefore, that most organisations do not develop this critical skill set in most of their managers.

## **A summing up**

The original paper discussed the two key roles of the holon in organisational hierarchies. The two roles are one of dependence and independence. The former is about integration with the rule set of higher level holons; the latter is about self-assertion and the application of the holon's own rule set. The two rules need to be in balance. Key messages include the need for the rules set by higher level holons to be simple principles to enable complex adaptive strategies to be developed. Others are the need for 'operational holons' to have that same degree of freedom of expression and for all holons to have permission to develop new rules sets when stress from the environment is high.

In this paper, we have considered an additional set of relationships between holons – the relationships that operate across informal organisational networks as well as vertically in the formal organisational hierarchy – these are about interdependence and assertiveness.

Key messages include:

- These networks are vital as a source of innovation – developed through problem resolution,

including root causes analysis.

- In healthy organisations, these networks are a vital source of (reverse) feedback to management on larger, organisation-wide issues that need top level attention.
- Innovation both depends on feedback and is a source of feedback – and feedback is essential for learning and development.
- Innovation does not often develop through polishing the existing way of doing things – we have to draw back to jump forward, and that includes challenging existing practices.
- Innovation is risky, and people need 'permission' both to share power across networks and to try out new ideas in pursuit of higher levels of performance.
- The negotiating model is a good enabler of effective management of network relationships.
- The negotiating model is a contradiction of old, command and control management styles – the latter have no place in managing network relationships - they are power-based, not assertiveness-based.
- A final logical implication is that informal networks cannot be managed by the command and control management style – or any other for that matter.