WOULD THE REAL PARTICIPATIVE DESIGN WORKSHOP (PDW) STAND UP PLEASE?

Merrelyn Emery
July 1998

Since its invention in 1971, many variations on the PDW have been successfully explored. Some of these are documented below. However, there are some variations which are not acceptable because they violate basic principles of the theory and method and have negative effects. Some of these are also described.

Also at the moment, there is evidence of some misunderstandings of terms normally used. The major instances are discussed.

Appropriate and Inappropriate Variations

The PDW flows from concepts within open systems theory and contains some fundamental principles that have been derived from that theoretical base. All of the appropriate variations follow these principles while the inappropriate ones violate them in different ways. The discussion below is set out under these concepts and principles.

The PDW is an extensively researched and developed tool for the single purpose of changing the genotypical design principle of an organization. It is very simple and clean because it has been pared down to the bare minimum. This means that every bit of it is vitally important. It is not just another OD process which can be thrown around with gay abandon. Nor should it be used when the basic conditions for its success are not in place and there is no promise that they will be.

The PDW is also demanding of theoretical understanding and a great deal of responsibility in its application. Designs must not be allowed to go into implementation until they are genuinely DP2 designs, have a full set of measurable goals attached, and all essential training and other changes have been made. Designs have consequences for many, not only those who live and work in them.

In the years since 'The Characteristics of Sociotechnical Systems' was published (Emery F, 1959), a lot has been learnt about how to change the design principle of structures so that the change is enduring.

1. *CONCEPT*: Organizations are governed by *a genotypical design principle. Legally constituted organizations* are governed by *a genotypical design principle which is encoded in many forms of documentation such as duty statements, job specifications and conditions of employment or work, and pay and classification systems. PRINCIPLE*: It is necessary to have a *binding agreement for some reasonable period of time* that the design principle will be DP2 rather than DP1.

Make no doubts about this. If the change is not a legal change of design principle, people are going to know it is not real and they will continue to behave according to the legal reality. Their jobs could be at risk if they didn't. Most of our organizations

for employment are *not* families. They are usually legally constituted entities where people go as individuals to sign up for a contract, some money and hopefully, a decent job and some opportunities for personal growth. They do not sign up to love each other or exploit others, or to have their efforts exploited. There is in most countries, a mass of legislation governing the relationship between these entities and their employees. Unions are there for the very good reason (amongst many) of protecting the legal rights of employees.

Even when people give their employers the benefit of the doubt and work DP2 informally (without some sort of agreement), the history of open sociotechnical systems is replete with examples of where sites were destroyed or faded away because:
- people knew they weren't real and reverted to the legal realities, e.g. no agreement, pilot only
- the larger system, if there is one, does not respect the changed arrangements within the unit, i.e. an agreement protects the unit
- of sabotage
- of managerial whim, eg. mergers, takeovers, sales, change of MD, etc, etc.

Even a new member of an organization can cause problems in an informal DP2 system particularly when they legally occupy a supervizory or management position. They can behave as supervizors or managers and get away with it because legally they are doing their job, regardless of the fact that they are disrupting the informal arrangements. Even when people have formed themselves into 'self managing groups', they are well aware that the legal positions of supervizor and manager are still on the books with their powers uneroded. This produces the crisis of responsibility which is experienced in informal DP2 and when there are cosmetic changes such as changing the name of the supervizor - the change from 'cop to coach' model. However it is described, it is ultimately an exercise in futility. This only contributes to the growing apathy and cynicism amongst the people at large.

Most agreements are embedded in enterprise bargaining or more generally labour management agreements. The clause governing DP2 should say that 'responsibility for coordination and control is located with the people doing the work or where the work is done'. Words such as 'self management', 'teams' etc, have been corrupted, can mean whatever Humpty Dumpty wishes them to mean, and the agreement can, therefore, be manipulated to avoid DP2 . There can be little doubt about the meaning of the pure conceptual definition.

Changing from DP1 to DP2 means that the managerial prerogative of personal dominance is negotiated away.

- Change must also be systemic within a ***boundary of autonomy***. Change of design principle ultimately affects all subsystems and processes.

If a section of an organization decides to change the design principle but does nor have legal authority to do that, it does not have the autonomy to redesign the pay system or other conditions. The result is economic injustice and again, ultimate increases in negative affect. People are being asked to work without commensurate conditions and remuneration. In non legal DP2 structures, people are shouldering responsibility for coordination and control, learning additional technical skills and

often developing rapidly as socially competent people, and being paid, amongst other things, as unchanging child idiots.

While money does not work as a motivator, particularly long term, unjust or inequitable pay is a great demotivator. People know when they are being short changed.

Moving to payment for relevant skills held appears at the moment to be the only system commensurate with DP2 that produces economic justice. It allows for individual differences in all spheres including those of stage and style of life and ambition.

Related to the above concept and principles is the whole notion of *pilots and demonstrations*. They have a very poor history for reasons which can be deduced from the above. The not so hidden motivation for them is obviously that "we are only looking at it", i.e. not serious (at least yet). Therefore, the many various reasons for 'paradoxical inhibition' apply, frequently making these experiments self defeating.

Today we have alternatives to the pilot or demo for people who haven't made up their minds. They are an *educational PDW* and the *Amerin simulation*. The only difference between an educational and real PDW is that before the educational one, no guarantees are given that the process will proceed or the designs will be put into implementation. It can be useful for people who want to see how it might work in their place. The simulation is even more risk free. It is for people who simply want to have a look at the method in the abstract.

2. *CONCEPTS*: **(1) People are open purposeful systems, (2) the 6 criteria**. PRINCIPLE: **There must be NO imposition of a design on anybody else**.

Open systems theory has a set of definitions of people which includes that they are:
* open purposeful systems (Ackoff & Emery, 1972)
* are potentially ideal seeking (Emery F, 1977)
* require a balance of autonomy and homonomy (sense of belonging) (Angyal 1941; 1965)
* have consciousness as defined by Chein (1972), that is, they can be aware of their awareness

The 6 criteria (Emery & Thorsrud, 1969) measure the conditions for intrinsic motivation and creativity. These also appear to be species rather than culturally based. They must also be taken into account in the process, not just the final design.

These very practical concepts and definitions of people underlie the whole notion of self management, to say nothing about treating people with dignity and respect. They are built into the method. For example, when you are working with open purposeful systems who can, and will, make up their own minds about the value of something, and can readily withhold commitment, successful organizational change demands that the people who work there have **ownership**. Karl Marx appears to have been right about people needing to own the means of production but the success of changing the design principle shows that first and foremost, the ownership is psychological. The

deleterious effects of DP1 are not ameliorated by members financially owning their own organizations such as cooperatives, unions and associations.

Therefore the principle is derived to ensure the highest probability of ownership (and also the very best workable design). If this principle is violated, there is a very high probability that the design will not work (no matter how technically excellent it is) and of course, if people have not learnt how to design using PDW, they will not have ownership of the method for future use.

If they do not have conscious conceptual knowledge of the genotypical organization design principles and the method, they will not be able to clearly articulate, use and diffuse them. Nor will they be able to argue for and sustain DP2 in the long term, for example, when renegotiating agreements. When DP2 is enshrined in a legally binding agreement and the ownership/'management' changes, no reversal of the design principle can be made until the agreement is up for renegotiation. Then those who wish the reversal must sit down and argue with those who have been working under DP2. The chances of a reversal are reduced and certainly, the 'at whim' principle is dead.

Ideal seeking and achieving a balance of autonomy and homonomy are glimpsed as people work their way through the potentials of DP2 design. The conditions for realizing them are finally achieved when they are working in DP2 structures. But involving everybody in the process and design also involves both autonomy and homonomy and may create a temporary space for a brief experience of ideal seeking.

Even when an organization is not rich, cannot afford to put everybody through a PDW, and is forced to use a 'deep slice' team, one of the responsibilities of the PDW manager(s) is to tell everybody in the organization that the 'deep slice' who attended the PDW will be taking back to the others, firstly the process and secondly, their draft design. They must explain to the rest, the briefings about the design principles and their consequences. Everybody in the (smallish) organization or section of the (larger) organizational structure must fill in and discuss their scores on the 6 criteria, and there must be a complete matrix of skills/knowledge distribution for the org. or section. Naturally, everybody must be involved in doing the design, the goal setting, deciding essential training requirements before 'start up', etc. Some organizations will do this informally in smokos etc. Or they may set aside a few convenient timeslots for it.

There is usually no problem with people following this rule because they want to share their excitement and good work with others and ensure that optimal designs for everybody are produced. However, there have been cases when people got so enthusiastic about their designs they rushed home only with the design. You may have to say it a few times if you think this is a danger.

Appropriate Variations
* A single section (see below for criteria for choosing) can do a PDW.
* More than one section may attend a PDW and separately redesign their sections, sharing reports.
* An even number of sections may attend the PDW paired up into mirror groups. The minimum number of sections is 2 working as one group, and the maximum depends only the number of PDW managers that can be assembled in the one

place at the same time. There is an obvious advantage for learning about the organization, and for efficiency in having more than one section get the briefings at the same time (see Further Learnings).

∗ Some smallish organizations or sections (say up to about 120) can use a large deep slice team of perhaps up to 40 people who then work in heterogeneous groups to design the whole show in parallel. The designs can be discussed and integrated during the PDW or left as separate drafts to be taken back to the rest along with the process.

∗ The Community Reference System has also been used creatively to choose people to attend a PDW when not everybody can be present.

∗ PDWs can be done either straight through or in separate bits. This method does not rely on the conditions for intensive work which are built into the Search for example. There are actually advantages in breaking the PDW into bits as each sequence of work can be immediately taken back and replicated for the rest, if only a deep slice attended the workshop.

Today we also have the variation of PDW for designing rather than redesigning, and some very creative work has been and is currently being done on creating greenfield sites within existing organizations. There is vast opportunity for flexibility and creativity in using the method.

Inappropriate Variation (violates the **NO imposition** rule).

∗ Having a deep slice team do a design for the whole organization or section and not involve all others in the process and design.

∗ Then run socalled 'PDWs' in which the groups that fell out of that deep slice design sort out their internal group rules or mechanisms.

This appears to be a hangover from the old obsolete method of sociotechnical systems analysis and design (STS) which uses representative design teams. These design teams went into sections of the organization, did research and ultimately designed the whole sociotechnical or sociopsychological structure within which other people had to fit. It caused problems because people did not have ownership of the designs and had no commitment to them. Some designs have been rejected out of hand. Some STS projects simply fade away before they even get a design.

Before you get creative with the PDW, go back to your theory, think your idea through very carefully and check it with an experienced practitioner. The inappropriate option above not only violates the no imposition rule, it also misleads about what the design work in a PDW is.

3. *CONCEPT*: ***Genotypical design principles and design work***. *PRINCIPLE*: The ***single purpose*** of a PDW is to do ***COMPLETE genotypical structural design***. Nothing else.

Genotypical takes precedence over phenotypical. The *inappropriate* variation above where intragroup discussion of rules and mechanisms for intragroup function is substituted for involving everybody in genotypical design work harks back to the work of Kurt Lewin, prior to the discovery of the design principles. Kurt Lewin et al's work on 'group climates' where the emphasis for democracy was on joint rule setting between leaders and followers sparked a great deal of work on developing processes

for such intragroup mechanisms. A part of what is called OD revolves around this base. The substitution as above is basically yet another form of team building which also violates the demonstrated knowledge that people are perfectly capable of sorting out their relationships when they have both the motivation and the conditions to do so.

The discovery by Fred Emery of the genotypical design principles (1967) during the Norwegian Industrial Democracy Program (and their subsequent testing) showed that it is the design principles which determine the long terms effects, not merely a set of practices for interpersonal interactions.

Appropriate: do the 3 parts as specified. Part 3 consists of critical design matters that complete the design. Whichever of the appropriate variations above is chosen, the design work in a PDW consists entirely of designing the genotypical social structure of an appropriately chosen section of the structure (or whole org.) **together with** designing in all the other aspects such as the comprehensive set of measurable goals for the section and groups within it. That is what 'complete' means. A design without goals, trained up people and other required changes is not a complete design.

How a group relates internally is none of anybody but the group's business. It is phenotypical and substituting this discussion for genotypical design treats people as less than responsible self managing adults, denies established knowledge of intrinsic motivation within DP2 structures, and also shows lack of awareness that groups constantly change their behaviour over time as circumstances change and they mature. Some groups will spontaneously choose to write out a few starting rules for themselves when they do the 'what else' work in Part 3, but again, this is their business and it should not be forced upon them.

The essential work that a group needs to do for internal coordination is decide what basic mechanism is appropriate for them. This may be a 5 minute daily meeting, or whatever, depending on the circumstances. This usually takes no more than a few minutes discussion as part of the 'what else' category in Part III.

The inappropriate option is, therefore, a trivialization of the PDW and a step backwards into the conventional arena of OD processes.

All of the ***additional design work*** included in ***Part 3 of the PDW*** must be at least started in the workshop so that at a minimum, the PDW manager can be sure that everybody understands its importance and how to do it. No design should be allowed to go to implementation until all these essential conditions for success are in place.

1. Goal Setting and Negotiation: Mistakes which have been evident include:
∗   neglecting the designing in of the comprehensive set of measurable goals for the section and each group within it,
∗   allowing some variation from a previous Search Conference to be substituted. These are strategic goals, not measurable targets.
∗   mistaking some 'what else' work such as making sure that we get a fair system for holiday leave for goals.
We have learnt that this set of goals must include relevant **numerical** measures of quantity, quality, human, social and environmental dimensions which cover every major aspect of the day to day work of the group.

The goals are critical because without them,

1. the group is not a group. There is no entity until it is defined by a set of shared goals. That is, without them, they are merely an aggregate of individuals thrown together.
2. the situation is *laissez faire* because in addition, there is nothing to control their self management and direction.

The **negotiation of these goals** is also critical because in this process, people ensure that the long term strategic goals are going to be achieved. All groups learn more about the business they are in, how important their work is to realizing the strategic goals of the organization (if they didn't know it before) and pick up a lot of business literacy which will be increasingly required as they mature and take on additional functions and group responsibilities. But of course, negotiation of goals cannot take place unless the group has already had a fair go at drafting their own realistic set as they see them.

The goals are the ***accountabilities***. Once negotiated and agreed, they must be met. If for example, raw materials into a group are not up to specification, meaning that the group is having problems meeting some of its goals, the group must do something about ensuring that the quality improves. Exactly what it will do is governed by what has been defined as within its functions. Because the group knows that it is accountable for meeting its goals, most groups have graphs and/or other indicators up on the wall or on call to show progress over the relevant period of time.

2. Training Requirements: Neglecting to get essential training requirements for the new structural design decided in detail can be a recipe for disaster. It can lead to:
∗ unhappy people who know they don't know what they are doing when they want to do a good job
∗ reductions in service delivery or
∗ accidents or mistakes, depending on the nature of the work.
• In addition, it is usually the essential training requirements which determine 'start up' day'.
If the training requirements for a particular design seriously blow out budgets or are going to take 6 people 6 years at university to get a degree, the design may be inappropriate. The temptation is always to arrive at stable self managing group designs when in fact the most appropriate design may be a mixture of some stable groups plus a pool of specialists who work in temporary, overlapping project teams, on call to provide support when required.

3. Career Paths: This is a shorthand way of describing the work that must be done in order to arrive at a pay for skills held system for the whole organization which meets all the different work within the organization and the aspirations of its people.

The participative democratic nature of the process demands that the people who work in an organization (or a section) must be given first go at spelling out what the steps within this career path would look like for their section. Different parts of the organization may have very different looking career paths. After all the initial design phase has been done, these drafts should be given to a professional career path

designer who will weld them into a system to provide choice and economic justice for all.

4. What Else?: Again this can be critical and can make the difference between a group working productively, happily and creatively, or not, e.g. not having appropriate, well maintained (not necessarily the latest) tools to do a job can be soul destroying.

A wide variety of matters have been handled in this open ended category. Mechanisms for internal coordination have been mentioned above. There may be a need to decide mechanisms for coordination with other groups who may or may not be present. If present, they can immediately decide between them. If not present, the group will decided on mechanisms to be discussed with other groups later.

Technological and/or layout changes may also be required. The work is done in the PDW and again, later negotiated with the relevant people. There may also be other processes which need to be designed if they are not already available in the organization, or if those that exist are seen to be incompatible with DP2 working. One organization discovered it did not have a system for dealing with 'difficult people'. They drafted one and checked it with the union.

This category is *not* there merely to list or notify of other required changes. **The work (answers) must be drafted in the workshop. If information relating to these changes is not available in the workshop, those who hold it (if it exists) should be called in immediately to provide and discuss it.** (This can also apply to any other category.) If the information does not exist, a system for collecting and distributing it must be designed in as part of the 'what else?' work.

5. Showing exactly how the new design improves the scores on the 6 criteria: There are two good reasons for including this work. The first is that it gives groups a sense of achievement and increased motivation when they can clearly see the benefits accruing to themselves and others through their work. The second is that it provides a check on the possibility of **disguised designs**, those which on the surface appear to be DP2 but which in reality are DP1.

Groups will approach this task in different ways. That is fine. Some will describe the improvements in words, others will estimate percentage or other numerical improvements.

4. *CONCEPT*: *a group*. *PRINCIPLE*: **The PDW is a *group based activity* providing an opportunity to work as a group**. Much learning about hidden interdependencies is done within genuine group work. It is *appropriate* for the matrix of 6 criteria to be discussed, completed and negotiated as a group because the result is an agreed analysis of what that org. or section of the org. has been doing to or for its people. They are, by putting all of the individual pieces together on the board, doing essential learning for their future DP2 working and learning how to do an organizational analysis. It is *inappropriate*, therefore, for individuals to firstly write down their scores on individual papers or silently fill in the public matrix. An organizational analysis is no more the sum of its parts than is a group. This principle applies in all 3 phases of the workshop.

*5. CONCEPT: **People are open learning systems**. PRINCIPLE: **Use criteria for choosing the appropriate section of organizational structure to be redesigned.***

DP2 organizations are 'learning organizations' (Emery M, 1993, p2). To achieve them, obviously the designs must be genuinely DP2 as above, be able to maximize the 6 criteria etc. But in large organizations there are questions about choosing the most appropriate sections as units for redesign. The 2 rules of thumb that have evolved through theory and practice are:
∗ the unit should be of sufficient complexity to allow for reasonable multiskilling and career paths (criteria 6) in the first instance, before voluntary rotation or mature evolution of designs kicks in
∗ the unit should be of sufficient size and complexity to allow for more than one workable design alternative so that people can genuinely learn what is involved in genotypical design work

Obviously, changing the design principle in such a little bit of a section as 7 base grade clerical assistants with a supervizor is a 30 second design with a very limited number of possible DP2 alternatives. It can fulfil neither criteria. But if these people were part of a larger unit redesign providing all support services for a technical or productive operation, it could meet both. This provides a reasonable starting point for learning. It is adequate to provide the fundamental conditions for intrinsic motivation and the development it fuels. If the overall design is DP2, then further opportunities will constantly be considered and designed in. There is normally a progression in DP2 designs.

*6. CONCEPT: **The basic module of a DP1 structure is a section of individuals with an S_1. PRINCIPLE: Design work must be done with nothing less than the basic module.***

Because of 5 above, it is often *most appropriate* to do design work with 3+ levels of the existing hierarchy. It is *inappropriate* to do design work with only one level of the existing dominant hierarchy. There may sometimes be a good case for working with a particular level, if productive work for these people has not been found in the PDW, but this comes after the complete design has been done.

DP2 and Non DP2 Designs

The name of the second design principle is **redundancy of function**. *You do not get a DP2 design by drawing circles around an existing small section or function.* A group of people doing housekeeping, routine maintenance, installing heater units, or taking complaint calls, does not provide the good start to DP2 evolution.
DP2 designs are built around:
∗ the work,
∗ which is done by the multifunctional groups (whether they include specialists or not), each of whom have
∗ a set of comprehensive, measurable (with numbers) goals covering every aspect of their ***productive*** work, and there is there is only productive work in a DP2 design,
∗ productive work for which they have adequately knowledge and skills.

'Facilitating' is not productive work, nor is 'leading' when it lacks productive, substantial content. There is always productive work to be done at the overall organizational or strategic level and this can be spelt out in measurable goals as can any other work. If there is insufficient productive work for a group of people, remember that "the devil makes work for idle hands". Not only that, people are just as unhappy being underemployed as overworked, or having low quality work.

Designing around the work means that if the work is producing fridges, patient care or servicing customers, multifunctional (sometimes called 'whole task') groups are built around product lines or natural boundaries within patient care or customers. i.e. where patients are located such as on ward or floors, and how customers are differentiated for example, by geographical area, size of account or alphabetically.

Any good design must maximize opportunities for each of the 6 criteria, including the 6th, 'desirable futures' based on good career paths. This involves access to opportunities for multiskilling. You can't get this with single function groups or one person/ one job. Similarly, do not rely on forced rotation schemes to substitute for multifunctional, multiskilled groups. Rotation between groups works best when it is voluntary and based on negotiation.

There are many variants on **non DP2 designs**. The most common are:
* enshrining existing single functions into groups,
* only having groups at the operational levels (expecting the design principles to mix within an organizational unit when they don't),
* having teams leaders,
* having individual managers 'look after' groups,
* elevating specialists to a new level of management when they are merely a support to the productive groups and essentially on the same functional level, i.e. mistaking special skills/knowledge for a management function

There are also **more extreme non DP2 designs** which actually enshrine status levels of the previous dominant hierarchy into groups. Fortunately these are fairly rare, but many have attempted to put designs into implementation **without** goals, the essential base training being done, other essential changes being made, and of course, above all else, having some sort of binding agreement in place to govern the change, and/or not rewriting all documentation which encases the legal design principle such as duty statements and job specifications.

There have been debates about where you start when you cannot readily gain an agreement or other conditions, and obviously some will continue to adopt guerrilla type strategies to force the issue. But even if it has to be done without the formalities required for long term sustainability, this should not be an excuse for not doing the PDW completely and well.

Other misunderstandings: 1. Do not assume that there must be three (or any particular number of) levels of non dominant functional hierarchy. That idea seems to have come from the old notion of workers, middle and senior management or from Oshrey's work. The final number of levels of functional hierarchy can be decided only empirically, after the design has been done or the designs have been integrated into an overall org. design.

2. Visual presentation is not simply a matter of aesthetics. Diagrams of DP2 structures looking like flowers or helicopters are very creative but miss the point which is that a DP2 design must visually take the form of a DP2 organization chart. It replaces the previous DP1 org. chart. It must show the actual structural relationships and who sits down with whom for negotiation of goals and major changes. If there are other matters you wish to convey in a design such as who attends special or regular meetings for some purpose, show these as dotted lines, or in another diagram, or in words to accompany the org. chart.

Terminology

Macros: We coined this term 'macro' in the late 1980s when we realized that even after some organizations had changed the design principle, they were hardly streamlined, or well designed. A 'macro' is a second stage design for this purpose of elegant effective overall design. It occurs only after the org. structure has been changed from one based on DP1 to one based on DP2, and the new arrangements have settled down and are working well. It is recommended that the original change of design principle occurs within major existing sections of the organization, recognizing of course that this may not be ideal in the long term. The big temptation for beginners is to do the macro first, but this has been proven not to be the best way to do it.

Consider the options.
1. You can change the design principle first amongst people who collectively know their section of the organization and can readily get on with the work, and then, when people are genuinely motivated to work for the organization and in fact can see other options, go for the ultimate in streamlined overall design. OR,
2. you can throw the whole organization into confusion by macro restructuring and changing the design principle at the same time, expecting people who have never worked together and know nothing of DP2 working, to suddenly adapt to two major changes. Our option is to achieve a smooth running organization through all the change, i.e. choose option 1. After all, given that most organizations have mucked around with making change without actually changing anything for as long as anybody can remember, is a few months really going to make a difference? Why not do it properly for once?

Macros when done appropriately and well, usually use deep slice teams from across the whole organization for starters but of course, follow the same rule of no imposition as in every other instance of PD. That is, this group then posts and discusses their design for debate and alternatives so that the best possible option is finally chosen. Some organizations have repeated the 'macro' PDW several times to ensure high participation and new creative designs. 'Town hall' meetings have been used to get final design decisions.

The term 'macro' should NOT be used to describe the design of a small single organization which is simply that. Some are currently calling this process a 'macro' but that is a corruption of the original use. Combining the term 'macro' with a non involving process using a representative design team and following up with intragroup OD processes (as above) gives the worst of all possible options.

Genotypical: Many processes employ what they call 'design principles'. Genotype is defined by Macquarie Dictionary as "the fundamental hereditary constitution of an organism, the breeding formula of genes, a group of organisms with a common heredity". Take the genotypical design principles as your DNA which says that you have blond hair and blue eyes. Of course, many people with blond hair and blue eyes choose to be different and dye their hair and use coloured contact lenses, i.e. they become phenotypically or superficially different. But genotypically they are still the same. After a few weeks, the blond roots show. Changing the phenotypes changes nothing in the long term.

Every organization is different in its history and phenotypical appearance. But beneath these superficial differences of culture and style, there are genotypical commonalities. These are determined by the genotypical design principles, those that relate to the characteristics of human beings (see above). That is what the field of open systems theory, and the PDW, is really about. Don't let the phenotypes of language get in your way. There are many excellent design principles around but only 2 genotypical organizational ones.

Also, you will find some who wish to add to the list of genotypical design principles. But responsibility for coordination and control is either vested where the work, learning and action is done, or it is not (see XXX herein).

Redundancy: Simply means 'in excess'. In Australia, redundancy can be a dirty word as in 'people have been made redundant', i.e. sacked or laid off for nothing more than short term profits. So does this mean that you should avoid the word? No. Because when you explain the genotypical design principles with the correct, accurate terminology, participants also start to understand why the redundancies have happened, AND why the short term 'downsizing' option is a self defeating one. When you attempt to take the redundancy out of the redundancy of parts without changing the design principle, you not only increase unemployment but you also end up with overworked, exploited, miserable people and organizations that don't work very well.

All OST methods are designed for learning. PDW is an educational method. Redundancy is a very useful word. In more ways than one.

Implementation: Implementation simply means putting something planned and designed into action. We have always called the design work in Part III of the PDW the 'Practicalities' of design. There may be a better name such as 'Completing the design'. But please do not call it "Implementation". This is misleading because it leads people to believe that it will all get sorted out later when people are working together. But as we have discussed above, if the fundamental conditions for DP2 structures are not in place, then it will not happen. Leaving this essential design work to implementation will result in disasters. Laissez faire is not DP2. DP1 is not DP2.

The Results

There are always consequences of touching the genotypical level. Whether done well or badly, they are predictable and highly visible. They are also measurable. We have had documented outcomes of really changing the design principle, doing it badly and

doing it in name only since the early 1950s. Examples of all continue to turn up in the literature.

There are several behavioural syndromes associated with DP1 structures but the most common appears to be passive adaptation. We may not like the long term effects of passive adaptations such as dissociation but in the minds of many they are preferable to being treated as guinea pigs by misguided practitioners. Changing the design principle has a long documented history of improving people's lives. Making changes which pretend to change the design principle but which don't, or which result in laissez faire, raise expectations but don't deliver. All of these have their own very serious effects. Remember that the behaviour which results from laissez faire is actually more maladaptive than that which results from DP1 structures (Lewin, Lippitt and White, 1960). We will look at these consequences under 4 headings.

1. For the Individual. When the PDW is done correctly and the design is DP2, most individuals experience changes in behaviour which can occur very rapidly after the change or even during it. They become more motivated and involved, have more energy and experience more positive affect.

When the PDW is done incorrectly and/or the design is not DP2 as in some of the above examples, individuals can actually suffer badly. They can experience any or all of
* misery and fear at being expected to do work for which they don't have the skills/knowledge
* confusion at not knowing what they are supposed to be working towards
* distress from overwork and lacking adequate time to get important work done
* distress at simply not being able to do a good job or a good day's work
* fighting, bickering and backstabbing as things go wrong and people blame each other,
* anger at being deceived that the change was going to be good for them etc. etc

2. Short term Transfer Effects. No person is an island and nobody lives in a vacuum. Changes in individual behaviour affect most directly their families and their communities. These so called 'transfer effects' have been recognized and documented at least from the Norwegian Industrial Democracy Program. When positive, both individuals and families report more harmonious internal relationships, more energy for doing things together etc. People report that they have stopped yelling at their kids. In communities, individuals from DP2 structures have become more active in community affairs, taking executive roles, etc.

When negative, people report breakdowns in family relationships, going home and yelling at their kids. This 'kicking the cat' syndrome which is embedded in folklore only demonstrates that human energy and affects are highly contagious. It is very difficult to live with a serious 'misery guts' without becoming one yourself. Conversely as above, the 'Pollyannas' of this world contribute greatly and make life worth living for many who do not enjoy the happiest or most materially affluent circumstances. After draft designs have been done, it is not unknown for people to take the options home and discuss them with their spouses and families, because they understand that what happens in one part of a person's life affects other parts.

3. Long Term Transfer Effects. The short term transfer effects are only the tip of the iceberg. As smile and laughter therapy is now accepted as it has been proven to have positive physiological effects, so living in constant internecine warfare, fear and misery from asymmetrical dependence and associated inequalities has documented behavioural and health consequences in the long term which ripple through communities and nations (eg. Wilkinson, 1996). Demotivated, demoralized and de-energized people are not going to overcome short or long term problems because by definition, they simply don't have the will or energy to even try. Ultimately we end up with maladaptive scenarios.

4. For Organizations. While most employing organizations are legal entities, they depend on people to make them work. They consist of people in some genotypical structural arrangement doing and making things together. It is irrelevant whether these are airline bookings, knowledge, money or gadgets. Both productivity and quality depend on people. No amount of specialized quality control or high supervizory ratios can compensate for seriously turned off people. Conversely, even POW and death camps could not stop some people from exercising altruism and ideal seeking behaviour. **PEOPLE WILL BE PEOPLE!** (See 2 above)

Such matters as communication patterns and their quality, interpersonal dynamics, role of personality, etc. have been extensively researched (Emery & Emery, 1976). They too are determined in large part by the genotypical design principles.

In Conclusion.

OST (and its concept of active adaptation) has shown its potential and its effects for nearly 50 years. Please treat it, and the people you work with, with all due diligence and respect.

References

Ackoff, R L and Emery, Fred E. 1972. *On Purposeful Systems*. Seaside CA: Intersystems. 1981.
Angyal, Andras. 1941a.. *Foundations for a science of personality*. The Commonwealth Fund. Harvard University Press. 1958.
Angyal, Andras. 1941b. "A Logic of Systems". In F. E. Emery (Ed.) 1981. *Systems Thinking*. Harmondsworth: Penguin Vol. 1. 27-40.
Angyal, Andras. 1965. *Neurosis & Treatment: A Holistic Theory.* Chichester: John Wiley & Sons.
Chein, Isidor. 1972. *The science of behaviour and the image of man.* NY & London: Basic Books.
Emery, F E. 1959. Characteristics of socio-technical systems. pp38-86 of Emery Fred, *The emergence of a new paradigm of work*. 1978. Centre for Continuing Education, Australian National University, Canberra; Originally Tavistock Doc. No. 527; and edited as pp157-186 of Trist & Murray, 1993. *The social engagement of social science*, Vol. II. Philadelphia. Uni of Pennsylvania Press.
Emery F E. 1967. "The next thirty years: Concepts, methods and anticipations." *Human Relations.* 20. 199-237.
Emery, Fred. 1977b. *Futures we are in*. Leiden. Martinus Nijhoff Social Sciences Division,

Emery, Fred & Emery Merrelyn. 1976. *A choice of futures*. Leiden. Martinus Nijhoff Social Sciences Division.

Emery, Fred and Thorsrud, Einar. 1969. *Form and content in industrial democracy*. Tavistock.

Emery, Fred and Thorsrud, Einar. 1975. *Democracy at Work*. Leiden. Martinus Nijhoff Social Sciences division.

Lewin K, Lippitt R & White R. 1960. *Autocracy and Democracy: An Experimental Inquiry*. Harper & Row. NY

Wilkinson, Richard G. 1996. *Unhealthy societies: The afflictions of inequality*. London & New York. Routledge.